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Cover: CHS Membership Secretary John Driscoll shares a center table at Reptilefest with Jim Nesci and his American alligator, Bubba. Photograph by Gary Fogel.

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Predation by Two Species of Coral Snakes in Limón Province, Costa Rica

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Three forms of coral snakes occur in Limón Province, Costa Rica: *Micrurus alleni*, *M. multifasciatus hertwigi*, and *M. nigrocinctus mosquitensis* (Campbell and Lamar, 1989; Roze, 1996). Although these snakes are frequently encountered in the wild, feeding is rarely observed, and in the case of *M. multifasciatus hertwigi*, prey is unknown. Two instances of predation by coral snakes were observed in 1994 and 1997 at Caño Palma Biological Station near the coastal village of Tortuguero. The following account briefly describes feeding as well as activity in *M. alleni* and *M. multifasciatus hertwigi*.

Located within the biological corridor connecting two national wildlife preserves, Caño Palma is a ca. 100-acre station operated by the Canadian Organization for Tropical Education and Rainforest Conservation (COTERC). The property consists of primary forest as well as an area of regrowth from a former tenant clearing. Caño Palma experiences periodic flooding, occasionally reaching depths of 2–3 feet.

Observations suggest that while both *M. alleni* and *M. multifasciatus hertwigi* occur on the property, their activity and habitat preferences are different. Swampy terrain predominates over much of the northeastern portion of the property. Late evening excursions through this terrain yielded multiple *M. alleni* in both November 1995 and March 1997. All snakes encountered were generally in contact with water and even submerged. When disturbed, the coral snakes would quickly attempt to escape by either crawling overland or diving directly into the soft muddy bottom of the swamp. Although I never personally observed *M. multifasciatus hertwigi*, two separate station managers positively identified this species at Caño Palma as having been found on slightly higher ground, closer to the living quarters. Additionally, this species has only been noted during the day, which is in accord with observations made by Villa (1984) on Nicaraguan specimens.

During an evening hike in March 1997, a small *M. alleni* was observed partially exposed in the wet leaf litter of a drying pocket of water. Upon closer examination, it was discovered that the snake was in the process of consuming a swamp eel (*Synbranchus marmoratus*) close to its own length and girth. A few leaves were carefully pushed aside from the completely distended anterior portion of the coral snake's body in order to

make identification, after which the snake was left undisturbed. At least six other species and subspecies of coral snakes are known to feed on this wide-ranging eel (Roze, 1996); *Synbranchus marmoratus* was first recorded as a prey item for *M. alleni* from a specimen collected in 1935 by Morrow Allen, for whom *M. alleni* was named (Gaige et al., 1937).

On an earlier trip to Tortuguero in 1995, Daryl Loth (Caño Palma station manager) described an incident that occurred in the summer of 1994 in which a caecilian was found during the daylight hours as it was crawling across a recently flooded grassy area near a drainage pipe. Surprisingly, upon returning to the scene after retrieving a camera, a bicolor coral snake (*M. multifasciatus hertwigi*) was found in the process of consuming the caecilian (see Figure 1). The coral snake (perhaps disturbed by the several people who were observing) ended up regurgitating the partially eaten caecilian, which was later preserved and identified as *Gymnopsis multiplicata*. This may be the first record of prey for the species; in a recent publication, Roze (1996) lists food for *M. multifasciatus* as unknown.

I gratefully acknowledge Daryl Loth for use of the photograph, Marilyn Cole/Executive Director/COTERC for assistance, and Tom Mason/Curator of Invertebrates/Metro Toronto Zoo and Vice President/COTERC for species identification and helpful comments.

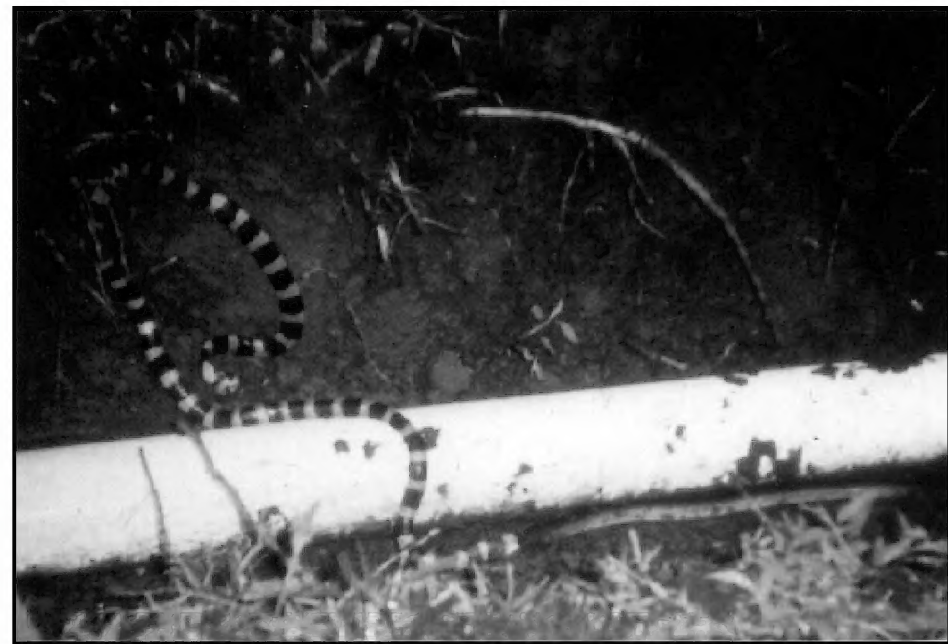


Figure 1. A bicolor coral snake (*Micrurus multifasciatus hertwigi*) feeding on a caecilian (*Gymnopsis multiplicata*). Photograph by Daryl Loth.

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Notes on the Reproduction of a Venezuelan Whipsnake, *Masticophis mentovarius suborbitalis*

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There is little published information on the habitat and reproductive biology of the neotropical members of the whip-snake genus *Masticophis*. All available information comes from Mexico (Alvarez del Toro, 1960; Minton and Minton, 1991), with no comparable information from South America. A female *M. mentovarius suborbitalis* was captured at 1230 h as it moved on a dirt road at Hato El Cedral (7° 27.11' N and 69° 15.85' W; 80 m asl), Apure State, Venezuela. It was found on 23 March 1994, and five days later laid 13 eggs in a cloth bag where it was being maintained for identification and processing before being released. Snout-vent length (SVL) of the snake was 1312 mm and total length (TL) was 1742 mm. Her mass after oviposition was 345 g. Mean egg length $\pm$ SD (range) was 42.2 $\pm$ 3.1 mm (37.5–48.5 mm). Total egg mass was 180.5 g.

Oviposition occurred during the dry season, in habitat characterized by seasonally flooded savannas (Sarmiento, 1990). Mean monthly temperature ranges from 25.4°C (July) to 28.5°C (March); monthly precipitation ranges from 5.1 mm (January) to 329.2 mm (July). Evaporation fluctuates from 141.7 mm (June) to 325.2 mm (March) (Tejos et al., 1990). At the time of capture, daily temperatures ranged from 22.5 to 35.7°C.

The clutch was incubated in a 12 $\times$ 19 cm plastic bowl. It was covered with dry garden soil that included clay and sand. On two occasions the eggs were sprayed with a small amount of water: at the start of incubation, and on day 91 when the eggs appeared dry and wrinkled. The incubation temperature ranged from 22 to 35°C. The temperature range was broad because the clutch had to be moved to Caracas (where daily the clutch was exposed to several hours of direct sunlight and to a 60-watt incandescent bulb). Temperatures were recorded with a mercury thermometer and an attempt was made to maintain ambient temperature for the clutch at close to 30° C.

The eggs began to hatch at approximately 1430 h on 1 July (rainy season), 95 days after oviposition. Eleven snakes emerged in apparently good condition. (Earlier one egg was

accidentally broken and another was opened on day 80 in order to observe and assess development). Immediately after hatching the neonates struck defensively and this was accompanied by vigorous tail vibrating. Mean lengths $\pm$ SD (range) of the neonates (n = 11) were: SVL 299 $\pm$ 9.4 mm (286–315), TL 389.6 $\pm$ 11.3 mm (370–406); mean mass was 12.1 $\pm$ 0.6 g (11–13). Total neonate mass was 133 g (n = 11).

If clutch weight is added to the body weight of the female after oviposition, the gravid *M. m. suborbitalis* had a mass of approximately 525 g before oviposition. Therefore, the 180.5 g clutch mass would represent 34.3% weight loss. Relative clutch mass (RCM), defined as maternal mass loss at parturition divided by maternal post-parturition mass (Shine, 1980), was close to 0.5. We consider this to be a reasonably accurate value considering that we do not have snake mass prior to oviposition (which occurred five days after capture). Applying the definition of RCM (total offspring mass / female total mass, including the clutch) used by Seigel and Fitch (1984), RCM is about .34, a value lower than those recorded (.409–.439) for species of *Masticophis* at temperate localities (Seigel and Fitch, 1984). Date of oviposition for *M. mentovarius* in Venezuela coincided exactly with that reported for *M. mentovarius* in Mexico (Minton and Minton, 1991).

We do not know where *M. mentovarius* lays its eggs in the savanna, but in this seasonally inundated environment oviposition coincided with the driest time of year. These data indicate that incubation must end before the savanna floods. In the Venezuelan llanos, *M. mentovarius* must deposit its eggs in a microhabitat that retards desiccation during incubation, but also prevents embryos from drowning from excess water in the incubating substrate.

These observations were made during the field work phase of a project to study the ecology and behavior of *Eunectes murinus* in the Venezuelan llanos, supported by Profauna and the Wildlife Conservation Society, and directed by John Thorbjarnarson, Jesús Rivas, and Maria Muñoz.

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Russian Herpetological Coins: A Study in the Meaning of Dragons

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Abstract

Previous reports on numismatic herpetology have documented 1708 herp-bearing coins minted since 1800. This paper identifies 163 coins from Russia, not included in the earlier counts, all bearing a horseman doing battle with a dragon, and all minted since 1800. The identity of the horseman and the meaning of the dragon are discussed. An appendix lists another 55 coins, also minted since 1800, bringing the total number of modern herpetological coins to 1926.

There are two problems with herpetological coins from pre-revolutionary Russia, virtually all of which involve dragons and most of these are under the lance of a mounted horseman. The first problem is that the herpetological image is usually drastically subordinated to the main device, the double-headed eagle, so that the dragon does not catch the eye, particularly in catalogue illustrations. Most commonly, in coins minted since 1800, the horseman and dragon are situated in the center of the eagle's breast, taking up but a few millimeters of space and less than 10% of the coin's surface area. Hence, these dragons are tiny and easy to miss, causing most of these coins to be of interest only to the most compulsive of herpetological numismatists (Figure 1). The second problem concerns the identification of the horseman, a matter of more than minor significance to herpetological numismatists, as we shall see.

The horseman is generally said to be Saint George. We have heard Russian coin dealers speak this way, unhesitatingly,

as if there was no question about the matter. Also, coin catalogues similarly refer to the horseman as Saint George, never even hinting that alternative interpretations might be possible (Severin, 1965). Therefore, it is with due caution that we enter this apparently clear and certain domain with iconoclastic ideas.

Saint George has, unfortunately, faded into the mists of premedieval history, and he is one of the saints that the Catholic Church "reconsidered." Several of these were eliminated from canonical roles "for historical reasons," meaning that they probably never existed except in myth and folklore. Saint George survived this reconsideration, though just barely. Legend has it that George met his trials in Libya (late third or early fourth century), and by subduing a dragon he saved not only a king's daughter but the kingdom as well, spreading the faith within Arabia in the process. Later, however, he was martyred, defending the faith with his dying breath. There are other accounts of Saint George which say that he was an English soldier who died for his company and the faith. It is most likely, however, that St. George was a Christian soldier in the Roman army who suffered at the beginning of the Christian persecutions under Diocletian (284–305 AD). Perhaps the martyrdom occurred in Nicomedia (now Izmit, Turkey; Every, 1970), or it may have been in Lydda, Palestine (now Lydda, Israel; Ferguson, 1990). Other locations are given in the literature on Christian history, but Lydda is the location of a tomb and shrine attributed to St. George. Noteworthy also is the persistent assertion that George was born in Cappadocia now in the valley of the Kizil Irmak River, Turkey, but formerly part of ancient Armenia and Georgia at various times. Accordingly, it is not surprising that St. George became as popular among eastern Europeans as he did among central and western Europeans. He is the patron saint of soldiers, and of England, Portugal, Catalonia, Aragon, Georgia and Lithuania, with his feast celebrated on April 23. In all of these places the dragon fighting aspect of St. George is widely known, reflecting the fact that the saint early inherited the features of Perseus who rescued Andromeda, sacrificed by her father to a devouring monster of the deep. In any case, the popularity of George in nations closely connected with Russia provides a basis for interpreting the horseman on Russian coins to be this saint.



Figure 1. Russian coins in our collection did not give rise to acceptable photographs, mainly because the horseman and dragon were too small. So we "borrowed" an image very similar to that on our coins. Here we show a knightly figure with flowing cape doing battle with a winged dragon. The image is from a Russian seal of the 16th century (Chernetsov, 1983).

The trouble begins, however, when we recognize that in the early coins of Russia there was a gradual evolution of the image, with numerous coins bearing only the horseman, and with some coins bearing dragons or serpents in the absence of the horseman. The two components come together in some of the coins of Prince Vasilii Tyomny (1425–1462), but numerous subsequent mintings departed from the simultaneous presence of horseman and dragon. Chernetsov (1983) argues that the horseman, especially when alone, represents the ruling prince, not a saint. Furthermore, he finds support for this view in a sixteenth century chronicle describing monetary reforms of Princess Elena of Glinsk. Here it says that the Grand Prince Vasilii Ivanovich had coins made with his image upon a horse, as did the Grand Prince Ivan Vasilievich. The latter Grand Prince had “in his hand a lance, and by reason of this they called them *kopeinyye* coins (that is to say, ‘kopeiki’ or kopeks, from *kopye*, ‘a lance’”; Chernetsov, 1983, p. 101; see also Yamin, 1970 and Soboleva, 1981). Hence, the case is reasonable that the horsemen are secular princes, and strength is added to this conclusion by the fact that the horsemen on coins lack nimbus (areas of radiant light around the head)



Figure 2. This image, painted in 1336, appears on a church door in Novgorod. Vestments, cross and nimbus all suggest a holy person. Hence, Russian artists of the time had many devices to use in suggesting a saint. Surely, if the die engravers wanted to depict Saint George on coins, devices such as these would be associated with the horseman. Never do we see such components in the many dozens of coins with horsemen and dragons, arguing that the image was of secular origin.

which are usually associated with saints in Russian iconography (Figure 2). Surely if engravers intended to depict St. George on coins, a nimbus would likely have been added to his image.

Now comes the problem of the allegorical meaning of the dragon, either when alone on a coin or when it is attacked by the horseman. In the first case, the work of Markov (1910) provides insight, as he deciphered an ancient inscription on a dragon-bearing coin: “He who waywardly issues a coin with the prince’s name shall be subjected to punishment (hewn) or condemned.” The dragon reinforced this sentiment by symbolizing the awesome power of the prince over all his subjects, including evildoers and counterfeiters, as well as his exclusive right to manufacture coins. This use of a dragon’s image is very close to the role of dragons on early Chinese money.

When a dragon is attacked by a horseman, the dragon represents the evils and chaos that princes must defeat in order to maintain order and economic good fortune. Evils include external enemies, particularly the Tatar–Mongol Khans (i.e., the Golden Horde) who frequently show up as dragons in ancient Russian literature. One wonders if this Russian linkage of dragons with the Golden Horde had anything to do with the frequent use of dragon images by the latter, having assimilated this image from conquered China. In any case, the symbolization of warring enemies by dragons is certain, as is shown by the following passage from Chernetsov.

The thought of strife with the Tatars, symbolized by the serpent, might also be associated among Russian bookmen with the figure of the single prince, Peter, who was a serpent-fighter. This is attested by an exceptionally telling passage from the service devoted to him that was written either at the end of the XVth century (a time when the Tatar yoke had not yet been thrown off) or in the first years after its elimination. “As once thou slewest the dragon and gavest the memory of him over unto oblivion, so now vanquish him who striveth against thy fatherland, so that we may glorify thee” (Yablonski, 1908, p. 96 cited in Chernetsov, 1983, p. 103).

Thus, it is reasonable to agree with Chernetsov that numismatic horsemen and dragons in ancient Russia have a more-or-less secular origin. Nevertheless, he points out that medieval Russians would have viewed these images in a manner similar to the way modern Christians view them. That is, the princely horseman attacking a dragon would have suggested a warrior saint, as paintings of several dragon-slaying saints were popular in Russian ikon painting from the pre-Mongol period and this popularity continued through and beyond the XV Century. As C. G. Jung would have said, the original secular image was capable of holding not only secular projections but also various religious projections as well, thus enhancing the richness of the image and ensuring its survival down through the centuries, long after the original secular meanings faded into the mists of history. For these reasons, 163 coins minted between 1800 and the Russian Revolution had horsemen and dragons in the eagles’ breasts. The dragons are tiny and easy to miss, but they are usually present. The coins range in denomination from ¼ kopek to 37 roubles, 50 kopeks. In all, 21 denominations are involved together with all of the metals used in Russian coinage at this time (copper, silver, platinum, gold). Because the herpetological images are tiny, relegating these

coins to the very margins of numismatic herpetology, we will not provide an itemized list. Instead, we refer interested readers to Krause and Mishler (1995) for details. Nevertheless, when these coins are added to the lists in Chiszar and Smith (1996a, b) and in Chiszar et al. (1996), the number of herpetological coins minted since the year 1800 comes to 1871. Moreover, the appendix to this paper lists another 55 items minted since 1800, bringing the grand total to 1926.

Russian coins prior to 1800 are of interest, partly because there are many bearing the horseman and dragon image, and partly because the image frequently filled the entire surface of some of these earlier coins. Since our original survey con-

sidered only coins minted after 1800, we will not say more about the earlier Russian material at this time, confining ourselves here to the temporal scope of the initial survey.

Following the Russian Revolution, the horseman and dragon disappeared completely from coins of the Soviet Union, probably because the antimonarchist and atheist character of the U.S.S.R. could not tolerate either the original secular meaning of the image or the Christian projections that it held. Since the collapse of the U.S.S.R., however, there has been a return to older Russian numismatic images. For example, the double-headed eagle is back, and perhaps we might see a welcome re-emergence of its ancient thoracic content.

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Appendix

In the table on the following page we list coins not contained in our previous publications (Chiszar and Smith, 1996a,b; Chiszar et al., 1996). All items were minted since 1800 and contain a herpetological feature. Because mintage statistics were unavailable for all but one coin, we omit that column from the table. The one coin for which figures were available was Australia KM 131 (a holey dollar) that was produced in 100,000 copies.

Many coins from the Lombardy-Venetia region of Italy contain the arms of Milan with its two snakes (upper left and lower right, respectively). The larger denominations are stunningly beautiful, and some of these coins are among the most valuable items in herpetological numismatics. Although they are not as valuable as the two-yen gold piece from Japan mentioned in Chiszar and Smith (1995), sixteen of the Italian coins have high values exceeding \$1,000. KM A1, listed without a value by Krause and Mishler (1995), sold at a Swiss Bank sale in 1988 for \$10,500.

See Chiszar and Smith (1996a) for advice in interpreting catalogue values, as the same considerations relevant in the earlier paper are equally applicable here.

Table 1. Further Additions to the Checklist in Chiszar and Smith (1996a,b)

KM#	Date	Animal Pictured	Denomination	Metal	Value (US\$)	
					Low	High
Australia						
112	1988	snake	1 dollar	silver	—	25.00
131	1989	crocodile	1 dollar	silver	—	25.00
Italian state: Lombardy–Venetia						
4.1	1822-1823	snake	¼ Lira	silver	35.00	220.00
4.2	1822-1824	snake	¼ Lira	silver	15.00	120.00
4.3	1822-1824	snake	¼ Lira	silver	15.00	120.00
15.1	1835-1837	snake	¼ Lira	silver	—	—
15.2	1837-1844	snake	¼ Lira	silver	75.00	250.00
5.1	1822-1835	snake	½ Lira	silver	50.00	325.00
5.2	1822-1824	snake	½ Lira	silver	12.50	100.00
5.3	1821-1824	snake	½ Lira	silver	10.00	100.00
16.1	1835-1837	snake	½ Lira	silver	—	—
16.2	1837-1844	snake	½ Lira	silver	35.00	250.00
36	1854-1855	snake	½ Lira	silver	30.00	200.00
6.1	1822-1835	snake	1 Lira	silver	25.00	250.00
6.2	1822-1825	snake	1 Lira	silver	20.00	200.00
6.3	1822-1823	snake	1 Lira	silver	20.00	200.00
17.1	1835-1837	snake	1 Lira	silver	—	—
17.2	1837-1844	snake	1 Lira	silver	50.00	375.00
37.1	1852	snake	1 Lira	silver	40.00	250.00
37.2	1853-1858	snake	1 Lira	silver	40.00	300.00
7.1	1822-1835	snake	½ scudo	silver	30.00	225.00
7.2	1822-1827	snake	½ scudo	silver	30.00	180.00
7.3	1822-1827	snake	½ scudo	silver	25.00	150.00
18.1	1835-1837	snake	½ scudo	silver	—	—
18.2	1837-1846	snake	½ scudo	silver	75.00	500.00
38	1853	snake	½ scudo	silver	150.00	800.00
A1	1816	snake	6 Lira	silver	—	—
8.1	1822-1831	snake	1 scudo	silver	25.00	250.00
8.2	1821-1835	snake	1 scudo	silver	50.00	350.00
8.3	1822-1832	snake	1 scudo	silver	30.00	200.00
19.1	8135-1837	snake	1 scudo	silver	—	—
19.2	1837	snake	1 scudo	silver	100.00	1,000.00
19.3	1837-1846	snake	1 scudo	silver	70.00	700.00
39	1853	snake	1 scudo	silver	150.00	900.00
10.1	1820-1831	snake	½ sovrano	gold	125.00	900.00
10.2	1822-1831	snake	½ sovrano	gold	125.00	900.00
10.3	1822-1823	snake	½ sovrano	gold	150.00	1,200.00
10.a.1	1835	snake	½ sovrano	gold	—	—
10.a.2	1835	snake	½ sovrano	gold	150.00	1,100.00
20.1	1837-1839	snake	½ sovrano	gold	200.00	1,800.00
20.2	1837-1848	snake	½ sovrano	gold	200.00	800.00
20.3	1837-1847	snake	½ sovrano	gold	200.00	1,000.00
20a	1849	snake	½ sovrano	gold	250.00	1,650.00
40.1	1854-1856	snake	½ sovrano	gold	350.00	2,000.00
40.2	1854-1856	snake	½ sovrano	gold	350.00	2,000.00
11.1	1820-1831	snake	1 sovrano	gold	250.00	1,450.00
11.2	1822-1831	snake	1 sovrano	gold	200.00	900.00
11.3	1822	snake	1 sovrano	gold	350.00	1,500.00
11a.1	1835	snake	1 sovrano	gold	—	—
11a.2	1835	snake	1 sovrano	gold	500.00	3,500.00
21.1	1837-1847	snake	1 sovrano	gold	500.00	2,400.00
21.2	1837-1848	snake	1 sovrano	gold	350.00	2,000.00
21.3	1837-1847	snake	1 sovrano	gold	300.00	2,000.00
41.1	1853-1856	snake	1 sovrano	gold	600.00	3,500.00
41.2	1854-1856	snake	1 sovrano	gold	550.00	3,750.00

Habitat Selection and Nest Survivorship of the Spotted Turtle, *Clemmys guttata*: A Preliminary Report

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Introduction

The spotted turtle (*Clemmys guttata*) is semiaquatic and generally inhabits marshes and sedge meadows throughout the northeastern United States (Ernst and Barbour, 1989). This species is widely distributed, extending from Ontario to southern Georgia and northern Florida, and from the Atlantic coast west to northeastern Illinois (Carr, 1952; Ernst, 1972). Spotted turtles are found in a variety of wetland habitats, including marshes, swamps, streams, ponds and sedge meadows. These wetland habitats are critical to the survival of the spotted turtles and many other species. If we are to truly conserve biodiversity, habitats must be critically monitored and evaluated.

Today this turtle is an endangered species in Illinois (Herkert, 1992) and its known range is limited (Mauger and Stillwaugh, 1991). The status of Virginia populations is unknown; the turtle is not listed as endangered in that state. The turtle's distribution in Virginia primarily follows the coastal waterways east of the Appalachian Mountains. Spotted turtle populations are declining throughout their entire range and it should be considered a species of special concern (Mauger, 1988; Carroll, 1991; Graham, 1995).

The purpose of this study is to gather multiyear data necessary to evaluate the landscape ecology, habitat preferences and habitat selection parameters of the spotted turtle.

Methods and Materials

Collectively, this study has evolved into an ongoing project that started in May 1992 and will end in May 1999. Because all the data have not yet been analyzed, the results that follow are to be considered a preliminary overview.

Observations were made on average three times weekly, and then bimonthly during the winter season. Turtles were collected exclusively by hand or muddling between 0600 and 1930 h. All specimens collected were marked. Straight-line morphological measurements were taken to the nearest millimeter with dial calipers. Turtles were weighed with portable spring scales to the nearest gram. Animals were aged by the methods of Sexton (1959). Individuals were sexed by the methods of Ernst (1975; 1976).

Single stage radio transmitters (150–151 MHz) with whip antennas (L. L. Electronics; Urbana, Illinois) were placed on eight adult *Clemmys guttata* in Illinois. Similarly, 13 turtles were radiotagged in Virginia. Transmitters were glued to the posterior edge of the carapace. A Custom Electronics (Urbana, Illinois) FLS-200 scanning radio receiver was used to relocate turtles. Each relocation was plotted on a habitat base map.

Upon relocating a turtle, the microhabitat was noted and

described. Biophysical features were measured and recorded. These include maximum vegetation height, substrate depth, water depth, air temperature, water temperature, substrate temperature, and cloacal temperature.

Results and Discussion

Radiotagged turtles were seen actively moving on land or in water throughout the year. Peak activity periods were from April through June. Spotted turtles become inactive and estivate from late June to early July when water temperatures increase (approaching 32°C). Estivation occurred through September to late November. Finally, by late November spotted turtles enter hibernation. In Illinois, all spotted turtles hibernated in cattail marsh. However, in Virginia hibernating spotted turtles were distributed among sedge meadows, shallow pools and flooded forested areas.

Spotted turtles often shifted microhabitats—daily and seasonally. In Illinois, turtles typically selected sedge meadow and cattail marsh for estivation, cattail marsh for summer activity and hibernation, sedge meadow and graminoid fen for nesting. In Virginia a different pattern was demonstrated. They selected sedge meadow and forested habitats for estivation, summer activity, hibernation and nesting. The cattail marsh was only utilized for transient movements. The preferred habitat in Illinois is cattail marsh with surrounding sedge meadow. In Virginia the area associated with sedge meadow and forest appears to be the preferred habitat.

Nesting females in Illinois selected dolomite prairie, graminoid fen, and sedge meadow habitats. In Virginia, spotted turtles utilized sedge meadow and forested areas as prime nesting habitats. Survivorship of nests and hatchlings is fairly low. Nest predators and environmental conditions play an important role in nest and hatchling survivorship. At both study sites nest predation was fairly low. In Virginia only one radio nest was predated. However, flooding and temperature fluctuations can also affect nest survivorship. In Illinois 20% (1 out of 5) of the radio nests survived, and in Virginia 33% (1 out of 3) of the radio nests survived. These values may be high due to small sample size (<5) or human disturbance (human scent may deter nest predators).

Future work will be conducted in 1997 at the Illinois study site and in 1998 at the Virginia study site. My plan is to monitor nest survivorship by recording nest temperature, moisture, and light intensity every two hours with HOBO data loggers. This may provide further insight into nest survivorship. This information could then be incorporated into conservation and management strategies. A final report will be submitted upon completion of this project.

Acknowledgments

Dave Mauger, Ed Moll, Carl Ernst, Chicago Herpetological Society, Washington Biologists Field Club, Zoology

Department at Eastern Illinois University, and Biology Department at George Mason University.

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Longevity Records for the Gray-banded Kingsnake, *Lampropeltis alterna*

Gerard T. Salmon¹, William F. Holmstrom, Jr.¹, Bern W. Tryon² and Gerold P. Merker³

Longevity records for captive snakes have been compiled by Bowler (1977), Snider and Bowler (1992), and Slavens and Slavens (1997). To date, published information on longevity for the gray-banded kingsnake, *Lampropeltis alterna*, gives records of 15 years, 6 months (Woodland Park Zoo, Seattle, Washington) and 14 years, 4 months at the Baltimore Zoo, Maryland (Slavens and Slavens, 1997). Both specimens are deceased. Here we report ages of four specimens of this species that exceed those given in previous reports.

One female *L. alterna* was collected near Langtry, Val Verde County, Texas, in early June 1973 and received by one of us (BWT) later in that month. This specimen is shown in Figure 4 in Murphy et al. (1978) and was part of a successful breeding program for a number of years (Tryon and Murphy, 1982). It was transferred to the Knoxville Zoo, Tennessee, in 1985, and was euthanized due to severely declining health on 23 February 1993. Actual time in captivity was 19 years, 7 months, but because this snake was collected as an adult, actual age was well over 20 years.

A male specimen was hatched in captivity in the above breeding group in September 1979 and was transferred to the Wildlife Conservation Park/Bronx Zoo on 25 April 1980 (WCS Herpetology number 800090). It was later transferred to one of us (GTS) in March 1990 and is alive at the time of this writing. Age as of 1 July 1997 was 17 years, 10 months.

A male collected on 18 June 1978 at California Mountain (Pepper's Hill) in Southern Brewster County, Texas, has been maintained to date in one collection (GPM). Time in captivity as of 1 July 1997 was 19 years, 0 months. Because this specimen was a young adult when collected, actual age is over 20 years.

Another male specimen was collected 7 km N Comstock, Val Verde County, Texas, on 14 July 1977 and received by one of us (BWT) in September of that year. It was transferred to the Knoxville Zoo, Tennessee, in 1985 where it has been maintained since that time. Time in captivity as of 1 July 1997 was 19 years, 11 months. Based on its size at the time of collection, it is estimated that it hatched in late summer or fall 1976, thus actual age is over 20 years.

1. Wildlife Conservation Park/Bronx Zoo, 185th Street and Southern Boulevard, Bronx, NY 10460-1099.

2. Knoxville Zoological Gardens, P.O. Box 6040, Knoxville, TN 37914.

3. 30 Rancho Del Sol, Camino, CA 95709.

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Book Review: *Komodo, The Living Dragon* (revised edition) by Dick Lutz and J. Marie Lutz 1997. Dimi Press, Salem. OR 97302. 193 pp. ISBN 0-931625-27-0. Softbound. \$16.95

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Whenever I meet someone who isn't a reptile enthusiast and the subject of family pets comes up, the reaction I get is predictable.

"What kind of pets to you have?"

"Oh, three cats and about 60 lizards," is my usual reply.

"Lizards?! Wow! Do you have any of those Komodo dragons?" is the question that often follows. Komodo dragons are the only lizard many people can name. And to some, this infamous varanid ranks right up there with the great white shark or the alligator as a malicious, calculating man-eater just waiting to prey on anyone unfortunate enough to cross its path.

One can easily see how these animals could gain such a reputation. Inhabiting four of the Lesser Sunda Islands east of Bali and south of Borneo in the independent Republic of Indonesia (formerly the Dutch East Indies), they existed only in legend to most of the world until their official "discovery" in 1910.

The dragons of Komodo should be seen as they truly are—magnificent reptiles that just happen to be at the top of the food chain in an island ecosystem where large carnivorous mammals failed to establish themselves. In the second edition of their book, *Komodo, The Living Dragon*, authors Dick Lutz and J. Marie Lutz (father and daughter) view these creatures in exactly this way. They chronicle the discovery of the dragons and early attempts at keeping them in zoos around the world, the history of which is quite depressing. They also detail the animal's current status both in captivity and in the wild. And for those readers who might want to experience these impressive creatures in their natural habitat, the book contains useful information about traveling to Komodo and its neighboring islands.

The book is divided into three main sections, the first of which comprises four chapters: "Komodo Dragons in the Wild"; "Traveling to Komodo Island"; "How Komodo Dragons Were Discovered"; and "The Unhappy Beginning of Dragon Zookeeping." Having only seen PBS documentaries on the dragons' behaviors and environment, I personally found this first section to be the most interesting. It includes accurate and colorful accounts of the animals, a description of their island home, and a detailed history of their discovery. A discussion of the first woefully unsuccessful attempts at keeping these animals in zoos around the world, with most of the dragons dying, sometimes only months after their arrival, brings the reader to the second section of the book.

Section Two has three chapters: "Komodo Dragons in Modern Indonesia"; "Komodo Dragons and the Modern Zoo"; and "The New Generation." These chapters detail the status of dragons during the last few years and at present. Recent successes in keeping and breeding Komodos in zoos, as well as the opportunity for the authors to correct some mistakes that had appeared in the first edition were two of the main reasons for revising that edition.

The third section has two chapters: "Hope for the Future" and "The Cincinnati Zoo Maintains Current Zoo Populations." These are followed by an appendix describing the National Zoo's support of field research on Komodos, and finally a bibliography and index.

The book is written to provide the average person an accurate view of the life and natural history of one of the world's most fascinating and misunderstood lizards, the Komodo dragon. I would suggest that anyone interested in these animals read this informative and well-written edition of *Komodo, The Living Dragon*.

The Grandest of Exhibitions: Reptilefest 1997

Text and photographs by Gary Fogel

Memorial Day weekend has come and gone, and with it Reptilefest 1997. Attendance was brisk on Saturday, but Sunday's crowd was more to our expectations. This was by far the most critically successful show we have had, due in no small part to tremendous participation by our members, with various vendors of herp-related merchandise rounding out the spectacular scene.

Reptilefest is an annual event, born four years ago as a direct result of the energy and vision of one of our members. That member was Marcia Rybak who had had experience with such shows when she lived in Los Angeles. Her guidance helped us put on our first show in 1994. At that point, we had named it "Reptile Expo." In 1996 it was called "Reptile and Amphibian Show," but in 1997 we decided to change it to "Reptilefest." This is the event name coined by this year's chairperson, Lori King-Nava, and will be used from now on.

At Reptilefest, CHS members show support for their Society by showcasing their animals for public viewing. For many the fun part of the event lies in interacting with the public and answering their inevitable questions. We were determined from the outset that this event would be strictly educational: the sale and trading of live animals are prohibited. That makes our show rather different from most other herp exhibitions of this size that are held elsewhere. We can concentrate on education, specifically dispelling the myths and misinformation that surround reptiles and amphibians, without having to deal with the carnival-like atmosphere that accompanies the buying and selling of animals. (This latter type of activity can be accommodated by organizing a captive-bred expo during the late summer.)

This year, in addition to all of our knowledgeable members who agreed to set aside their weekend to participate in this event, we also came up with a few new educational twists. One was the video corner, where one could sit down at leisure

and view continuous showings of a variety of reptile and amphibian nature videos. Also we had several "Pet and Learn" sessions during the day, which were specifically aimed at children. At these sessions CHS members give short, general talks about snakes, turtles, etc., accompanied by a live example, to groups of youngsters. Alongside our tables of members' exhibits were 15 various vendors of dry goods, feeder insects, aquariums, cage enclosures, T-shirts, corkbark, wood, and any other type of reptile-related products and items one could imagine. All this, plus a large selection of books for sale from *Serpent's Tale*.

Reptile and amphibian-wise, we had more on exhibit this year than ever before. With about 50 of our members personally showing animals, if you had wanted to see a specific type of animal it was probably at Reptilefest this year. Another difference was in the animal displays themselves. No longer content to just plop an animal in an aquarium, this year our members made an effort to back up their reptiles and amphibians with more written material, photographs and articles to better round out the displays and convey as much information as possible. One person even displayed information using a laptop computer in front of her exhibit of day geckos. The wizardry of modern technology abounds.

It amazes me how a show of this size can be assembled from dozens of seemingly unrelated parts, everyone doing their assigned tasks, and the end result is Reptilefest. The number of animals to be seen at this show easily rivals many zoo collections. Not only can one come and see more reptiles and amphibians than "there are stars in the heavens" but also learn about them, handle them, and experience them, so as better to appreciate them and the roles they play in the grand scheme of things. I seriously urge all CHS members to become more actively involved next year in helping us plan and execute this event for the general public's benefit. Here's hoping that Reptilefest 1998 will be even bigger, and better than ever!



Photomosaic overview of Reptilefest 97.



Both Ron Humbert and his audience are totally engrossed in a “pet and learn” session.



There’s always a crowd at the turtle and tortoise pen, which was built to last by Brian Jones.



Jim Nesci’s American alligator, Bubba, strolls past some interested visitors.



Former CHS President Marcia Rybak and Eric Spitzer, son of our current President, show it off at the entranceway.



Jenny Picciola is partially eclipsed by her iguanas and their branches.



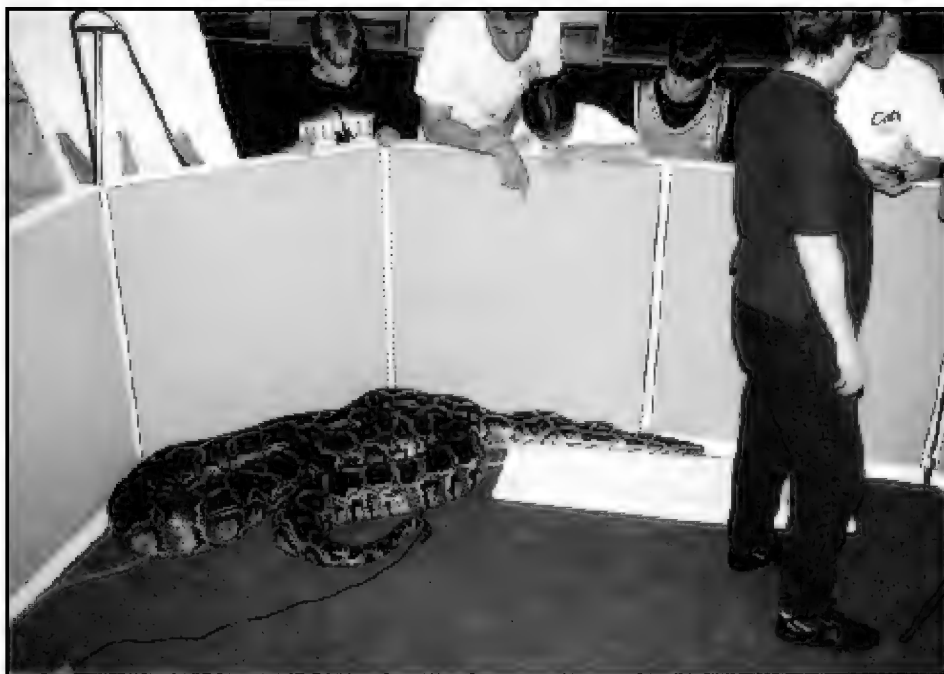
Phil Drajeske’s attractive display of sideneck turtles.



Ty Park's impressive lizard displays command several tables.



Phil Drajeste captures Ron Humbert's striped boa constrictor on videotape, while box turtles rustle in the leaves below.



Joan Moore shows a hatchling ball python to an admiring visitor while others gaze in awe at Joan's 18-foot, 200-pound Burmese python, Pythagoras.



John Kostka fearlessly defends his muffin from a stuffed caiman.



Dottie Humbert's always-popular corn snake tree. Where does her T-shirt end and the tree begin?



Don Wheeler applies a temporary scorpion to a customer's forearm. Don, Nicole Lechowicz, Kim Smith and _____ gave unstintingly of their artistic talent to benefit the CHS coffers.

HerPET-POURRI

by Ellin Beltz

There's some really weird people out there

An article in the Bastrop, Louisiana, *Daily Enterprise* reports that a house in that town was completely destroyed by a fire. The Fire Chief said that the accidental fire started in the kitchen: "It was reported that a snake was found in the kitchen and a gallon of gasoline was poured on the snake, which was near the stove. The gas stove ignited immediately. . . . The house, valued at \$25,000, was totaled out." [June 10, 1997, from George M. Patton and Martha Ann Messinger]

How long it's taken to get here

The Center for Marine Conservation [CMC] reports: "Nearly 24 years passed between the time that the Kemp's ridley sea turtle was formally listed as endangered and the time that turtle excluder devices (TEDs) were required in all shrimp trawls operating inshore and offshore from North Carolina to Texas in order to protect the Kemp's and other threatened sea turtles. . . . The complete story of sea turtles and shrimp trawls [is in] CMC's *Delay and Denial: A Political History of Sea Turtles and Shrimp Fishing* . . . \$10.00 plus postage and handling." Write CMC for more information: 1725 DeSales Street, NW, Washington, DC 20036. [*Marine Conservation News*, Summer 1997, from Kathy Bricker]

More turtles die in Gulf of Mexico

"Seventeen Kemp's ridley turtles, the world's most endangered sea turtle, have been killed in Texas waters since 1 April as a result of nearshore shrimp fishing activity. Only 1,500 female Kemp's ridley nesters remain in the wild and the Texas shrimp season's arrival is further threatening the species' survival. Recent reports showed that 41 percent of Texas shrimpers were not in compliance with U.S. TED laws. Call Rolland Schmitt, (301) 713-2239, of the National Marine Fisheries Service to ask for increased enforcement of turtle excluders and a 60-day closure of fishing activities within three miles of shoreline along the Texas coast. Contact Earth Island Institute for more info: (415) 488-0371." Todd Steiner, Earth Island Organization <seaturtles@earthisland.org.> [from Roger Featherstone and Carole Allen, April 20, 1997]

Sea turtle project sunk

Even though the Northern Indian Ocean Sea Turtle Workshop in Bhubaneswar, India, in January of this year was a big success [*Marine Conservation News*, Summer 1997, from Mark T. Witwer], promoting cooperation between the IUCN's Marine Turtle Specialist Group, the Convention on Migratory Species and the U.S. National Marine Fisheries Service and delegates from Bangladesh, India, Malaysia, Maldives, Oman, Pakistan, Saudi Arabia, Sri Lanka and Thailand, an important sea turtle research project in India has been sunk by apparent lethargy on the part of India's massive bureaucracy. A collaboration between an American researcher and an Indian professor had planned to use a \$70,000 grant to track sea turtles by satellite radiotelemetry. At the time of this writing, the American has left India to work in the Caribbean this season instead. It is reported that the specially made transmit-

ters have an effective battery life of only a few months and that any further delay on the part of the Indian government would have prevented the effective collection of data from turtles migrating through the Indian Ocean [*Chicago Tribune*, June 25, 1997]

One baby turtle saved

A 5-pound baby green sea turtle was found swimming in the brackish waters of Lake Borgne near New Orleans. Rescued by workers from the Aquarium of the Americas, "Popcorn" is unique because of the 71 turtles found stranded since 1990, only he has survived. The turtle was checked for parasites, vitaminized and released. [*The Times-Picayune*, December 30, 1996, and *Houma Courier*, January 3, 1997, both from Ernie Liner]

Happy birthday to you, and to you and to you . . .

A 330-pound anaconda captured a few months ago in the Amazon has delivered its young in captivity. As many as two dozen babies are expected by keepers at the Wisconsin Dells "Serpent Safari" tourist attraction. The attraction is no longer the home of the 20-foot-plus reticulated python that reportedly nearly killed owner Louis Daddono in January 1997. The snake had been stabbed 30 times while the owner struggled to free himself from its coils. It died after six weeks of veterinary treatment. [*Wisconsin State Journal*, May 30, 1997, from Maggie Jones and Dreux Watermolen]

Music hath charms to rile the savage beast

A researcher from Harvard University played tapes of a trombone and a French horn playing the note "B-flat" to a pit full of alligators at the Wonder Gardens in Bonita Springs, Florida. The gators didn't go for the trombone, but liked the French horn and began bellowing and dancing in the water. Some even began foreplay such as that usually associated with mating. The professor reports that the note appears to trigger the reptile's mating hormones. [*Bonita Banner*, May 31, 1997, from Ardis Allen]

Behold the dodo

A retired Los Angeles firefighter who moved to Guam decided he'd had enough brown tree snakes when he found one inside his pet canary's cage with the pet canary inside of the snake. So he killed it. Then he went on a brown tree snake hunt and killed 50 more. The Director of Guam's Department of Agriculture said, "For years the [US] government said there was nothing we could do. But they were wrong." The director has personally taken 500 brown tree snakes, and since last September, his staff has distributed about 1,300 snake traps, each baited with a live mouse. The snake population in the area around the airport—where these efforts have so far been concentrated—is down and some bird species are showing signs of increase. Jack Russell terriers are being trained to catch the snakes, and one researcher is working on a nonliving scent attractor that smells like dead mouse. Others have suggested introducing the king cobra (*Ophiophagus hannah*) since it eats

other snakes, but some local residents object and so that proposal has been shelved. [US News and World Report, June 2, 1997, from Mark T. Witwer]

Barton Springs Salamander wins court case

- In an opinion released March 26, Senior Federal Judge Lucius Bunton found that Secretary of the Interior Bruce Babbitt violated the Endangered Species Act and the Administrative Procedures Act when he decided to withdraw the proposed endangered listing of the Barton Springs salamander. The small aquatic salamander lives at Barton Springs, Texas, and nowhere else in the world. The U.S. Fish and Wildlife Service had identified the salamander as its top priority for adding to the endangered species list among all candidates for listing in the service's four-state southwest region (including Texas, New Mexico, Arizona and Oklahoma). In striking Secretary Babbitt's decision, the court found that "strong political pressure was applied to the secretary to withdraw the proposed listing of the salamander" and that the record suggested "that political lobbyists for the development community worked with political appointees of the secretary." Perhaps most notably, the court held that it was improper for Babbitt to withdraw the proposed endangered listing based on a "conservation agreement" the U.S. Fish and Wildlife Service entered into with the Texas Natural Resource Conservation Commission, the Texas Department of Transportation and the Texas Parks & Wildlife Department. The ruling came in the second suit by the Save Our Springs Alliance on a petition filed in January of 1992 by Dr. Kirkpatrick and University of Texas geologist Barbara Mahler to add the species to the endangered species list. Secretary Babbitt lost the first suit in last July when the court ruled that he violated the ESA when he failed to respond to the petition in accordance with deadlines set out in the act. The court's ruling requires the Secretary of the Interior to make a new decision on the Barton Springs salamander listing within 30 days. For more information and/or copies of the court's opinion contact Southeast/Texas field office at 1104 Nueces #3, Austin, TX 78701-2128; phone (512) 472-9094 [April, 8, 1997, from James N. Stuart]

- The *Austin American-Statesman* reports: "Bowling to pressure from a federal judge, U.S. Interior Secretary Bruce Babbitt said Tuesday that he would list the Barton Springs salamander as an endangered species. The announcement, which came coincidentally on Earth Day, outraged [Texas] Gov. George W. Bush, delighted environmental activists and sent ripples of concern among landowners and developers in a vast area that feeds water to the Zilker Park habitat of the tiny amphibian. . . ." [April 23, 1997, from William B. Montgomery]

Thieves strike twice in South Africa

- "On behalf of Mr John Spence, Director of the Tygerberg Zoopark, Kraaifontein, South Africa, I am reporting a theft of terrestrial tortoises from the well-established terrestrial tortoise breeding group at Tygerberg Zoo. Ten animals were removed, presumably during the weekend of March 28-30. The species involved are as follows: *Psammobates geometricus* (1 male and 3 females, one of which carries eggs), *Geochelone*

radiata (1), *Homopus signatus signatus* (1), *Homopus femoralis* (1), *Kinixys spekii* (2), *Kinixys lobatsiana* (1). The animals were removed from a chain-link fenced enclosure situated next to the director's residence (in an attempt to prevent theft!!).

No visitors to the zoo are allowed inside the enclosure, and the curator of reptiles, Ms. Tamara Harris-Smith, only handles tortoises on special request for photographs." Dr Ernst H. W. Baard, Cape Nature Conservation, Private Bag 5014, Stellenbosch 7599 South Africa Fax: +21-8871606 [April 4, 1997]

- "Another theft of terrestrial tortoises from the Tygerberg Zoopark, Kraaifontein, South Africa, has brought the captive breeding program to a practical standstill. The animals were again (refer to a previous posting on the first theft) removed from the enclosed area during the night of May 28, 1997. The numbers and species involved are: 1.4 Geometric tortoises, *Psammobates geometricus* (CITES I); 0.3 Tent tortoises, *Psammobates tentorius* (CITES II); 1.0 *Kinixys spekii*, Savannah hinged tortoise (CITES II); 0.1 *Kinixys lobatsiana*, Lobatse hinged tortoise (CITES II). This is a general alert to anybody who comes across any information in this regard to contact me via e-mail or fax. Please be on the lookout for offers/deals where any of the above-mentioned taxa might be involved. Thank you." Ernst Baard [May 30, 1997]

So why did they steal it, anyway?

Allen Salzberg sent this followup to a previous story: "In February, thieves stole a 4-foot-long caiman from the San Francisco zoo. The reptile was found—cold, dehydrated, bruised and tied to a tree—near a San Jose park bike trail. It's recovering in the zoo." [May 15, 1997]

Limit frog takings by schools

"A Western Australian paper, the *Sunday Times* (May 25, 1997), reports on the Stirling City Council notifying the 200-odd schools in its shire requesting that each school limit the number of tadpoles taken for the classroom. The number of rare frogs and the declining frog population in the area had prompted the need for limits. At the same time it did not want to stop the children from using the waterways but to respect them. In the request to the schools it asked that each school limit the number of tadpoles taken to a number equal to the number of classrooms at each respective school. Good awareness stuff. Congratulations Stirling City Council!" Brian Bush, SNAKES Harmful & Harmless, 9 Birch Place, Stoneville, WA 6081, Australia <<http://www.nettrek.com.au/~bush/index.html>>

All the laws in the world can't stop this

"I just spent a week herping and photographing herps in west Texas. On the way home through Oklahoma, we spotted over 50 dead box turtles in a 32-mile stretch of two-lane highway. We managed to get five living ones off to the side of the road, one of which a man in a pickup (with a young boy in it) went off onto the shoulder in an attempt to run over, saved only by one of our party stepping in the way. We didn't count the dead red-eared sliders; there were too many to keep track of. We also saw five DOR Texas rat snakes in about a five-mile stretch. I've witnessed the same thing in southern Illinois on

more than one occasion. If 50 box turtles die in a 32-mile stretch of road, how many are killed on roads nationwide in May, an active month for them? Ten thousand? Fifty thousand? My opinion: You can pass all the import/export laws you want; as long as there are morally bankrupt people who assuage their feelings of inadequacy by running over helpless animals, as long as there is indifference and ignorance over the carnage in the general public, the box turtle will continue to fade from the American landscape.” Mike Pingleton [May 27, 1997]

Oklahoman asks for help

Richard Lardie writes: “Oklahoma’s turtle populations are being threatened by commercial turtle harvesters. . . . Both Oklahoma paddlefish and turtle populations need to be regulated. . . .” Laws are coming up before the Oklahoma House and Senate to protect state wildlife. “Any support you and your organization could provide would be greatly appreciated. . . . Oklahoma Senator Frank Shurden is Chairman of the Oklahoma Senate Wildlife Committee. He is said to loath and despise turtles and doesn’t believe they have any good points. . . . These individuals and others in Oklahoma’s Congress need to know the value and importance of turtles in our ecosystem. Write State Capital Building, Oklahoma City, OK 73015.” You can contact Richard at P.O. Box 9002, Vance AFB, OK 73705. The Chicago Turtle Club, affiliated with the CHS, has already addressed this issue at their meeting. I hope to hear that the other turtle organizations in North America (and around the world) have a go at this.

Reptile importer sentenced

A May 30, 1997, press release from the U.S Department of Justice, the U.S. Attorney’s Office and the U.S. Fish and Wildlife Service (USFWS) reads in its entirety: “Zachary W. Carter, United States Attorney for the Eastern District of New York, and Adam O’Hara, Special Agent in Charge, Law Enforcement, USFWS, announced today the sentence imposed in a significant criminal wildlife case, *United States v. Bronx Reptiles, Inc.*, 949 F. Supp. 1004 (E.D.N.Y. 1996). On December 17, 1996, Bronx Reptiles was convicted of unlawful importation of 73 Solomon Island frogs under inhumane conditions, in violation of the Lacey Act, 18 U.S.C. 42(c). The importation led to the deaths of all 73 of these rare amphibious animals, which the Lacey Act seeks to protect by requiring shipment under humane conditions. On Wednesday, Magistrate Judge Cheryl L. Pollack sentenced Bronx Reptiles to the maximum penalty permitted by law, \$10,000, and she additionally placed the company on five years probation to ensure prospective compliance with the Act’s legal requirements. Defendant Bronx Reptiles, located in Yonkers, New York, is one of the nation’s largest wholesale importer of live reptiles, amphibia, and other wildlife for sale to the pet trade. In this case, Bronx Reptiles imported frogs in a box with none of the required careful packaging, and, most importantly, with no source of water. The International Air Transport Association (IATA) Live Animal Regulations provide specific guidance for packing frogs, stating that they “must be kept damp as they breathe through their skins; if their skins are allowed to dry, the animals will die quickly.” In her earlier decision, Judge

Pollack concluded that “[d]epriving a frog of sufficient moisture is virtually a guaranteed death sentence for that frog. . . .” She rejected Bronx Reptiles’ claim that it could shift the blame to the overseas exporter, holding that “Bronx Reptiles, one of the largest importers of its kind in the country and responsible for numerous shipments of amphibians and reptiles, was not only aware of the industry guidelines for shipping these types of animals, but was also very familiar with the regulation holding the importer responsible for ensuring that humane shipping conditions are used. In announcing the sentencing decision in this case, Mr. Carter stated: “This conviction should encourage Bronx Reptiles and other wildlife importers to take all necessary precautions to assure that live animals are imported under humane conditions, which do not cause suffering or death to animals. Mr. O’Hara stated that the USFWS is committed to enforcing the humane shipment provisions of the law which plainly hold United States entities responsible for the shipping conditions from their overseas suppliers. The case was prosecuted by Assistant United States Attorney Stanley N. Alpert.” For more information, contact Bruce J. Weissgold, CITES Policy Specialist, Office of Management Authority, USFWS, 4401 N. Fairfax Dr., #430, Arlington, VA 22203 USA. Fax (703) 358-2280; E-mail: <Bruce_Weissgold@mail.fws.gov> [from Steve Grenard]

Way to go, THS!

“Last week a judge ruled that the USFWS has 60 days to decide whether to list the flat-tailed horned lizard under the federal Endangered Species Act, according to a Defenders of Wildlife release. Resulting from a lawsuit by the Tucson Herpetological Society and others, the USFWS is seeking comments on its decision to list the species indigenous to the Sonoran Desert of Arizona, California and Mexico.” [from Roger Featherstone, June 2, 1997]

Breathing and Screaming, III

New CHS member Rich Crowley sent a copy of the *Chicago Sun-Times* article on the movie “Anaconda” that is just full of fun facts about these giant reptiles, including: “Scientists say anacondas have been around for billions of years. . . .” Rich writes: “I could not resist the opportunity to contribute. . . . [this] especially since dinosaurs roamed the earth 65 million years ago!” Being a geologist by education and a herpetologist by avocation, I always find newspaper articles about science rather amusing—but “billions” of years for snake development is very, very funny as the first algae date to about 3.8 billion years ago (ya), hard-shelled life to about 600 million ya, first amphibians to about 400 million ya, first reptiles to about 280 million ya, and first mammals to about 240 million ya. We ourselves date to a whopping 200,000 years in modern form. Oh well, a year here and a year there and pretty soon you’re talking real time, huh?

Thanks to this month’s contributors and to Jack Schoenfelder and Ardis Allen for stuff I enjoyed reading, but couldn’t use this month. The file folder is getting thin, though, and I’m looking forward to getting lots and lots of clippings from dedicated readers like yourself. You can join the few, the proud, the contributors! Merely take pages of newspapers and

magazines being sure that the date/publication slug is on some part of the page, put your name on each page (those freebie address labels from various not-for-profit appeals work well for this!), fold a minimum of times and try not to use staples

or paperclips (clear tape any loose pieces together). Place in a large envelope and mail to: Ellin Beltz, 1647 N. Clybourn Avenue, Chicago, IL 60614-5507. You can write letters to me at my e-mail address <E-Beltz@neiu.edu>.

Unofficial Minutes of the CHS Board Meeting, June 13, 1997

The meeting was called to order at 7:40 P.M. Board members Ron Humbert, Ty Park and Jennie Picciola were absent.

Officers' Reports

The minutes of the May Board of Directors meeting were read, corrected and accepted.

The Treasurer's report was distributed and accepted. The financial report on Reptilefest was also distributed and briefly discussed. Although it was an aesthetic success, the fest lost money this year.

John Driscoll reported that membership was up slightly this month to 1237. John made mention that our stock of *Care in Captivity* booklets is nearly gone. The consensus was that we not print any more due to the outdatedness of the booklet and the fact that good husbandry information is so much easier to find than it was just a few years ago. Possible alternatives will be discussed at the second membership committee meeting at Audrey Vanderlinden's on July 11.

Jack Schoenfelder reported that the CHS tax forms for 1996 were filed on time. As usual, no taxes were due. Jack asked the board about ideas for the November elections meeting, and raised the possibility of making it a "Christmas shopping" meeting.

Committee Reports

Shows: Jenny Vollman announced that she and Bob Bavirsha represented the CHS at the Little Red Schoolhouse "Environmental Awareness Day," June 18. The Arlington Family Pet Show wants us back next year.

Nominating Committee: The committee so far consists of Mike Dloogatch, Jenny Vollman and Gino Martinez, with two more non-board-members yet to be appointed. Gino will serve as chairman.

Old Business

Steve Spitzer passed around a rough copy of the first Zoo Book Sales list that will be inserted in the *Bulletin*, offering discounted books to CHS members.

Jack Schoenfelder thanked Jill Horwich for preparing a formal sales agreement between the CHS and Serpent's Tale / Zoo Book Sales.

Jack also presented a form letter to be used to acknowledge donations to the CHS. The letter was revised and accepted.

New Business

John Driscoll moved to make Joan Moore an honorary member of the CHS. Gary Fogel seconded. The motion passed unanimously.

Round Table

Audrey Vanderlinden announced the successful breeding of her *Uromastix ornatus*, resulting in 34 eggs from two females this year. This species has not commonly been bred in captivity.

Jack Schoenfelder thanked Lori King-Nava on behalf of the CHS for her wonderful job with Reptilefest.

Gary Fogel announced that he has written a story on Reptilefest for the July *Bulletin*.

The meeting adjourned at 8:55 P.M.

Respectfully submitted by the Recording Secretary
Audrey Vanderlinden

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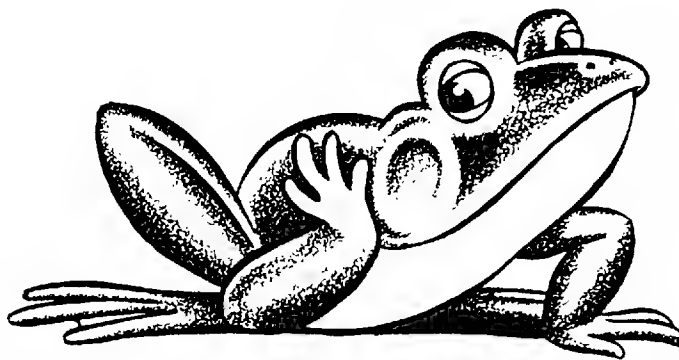
The Losers of Evolution

Dear Editor:

Environmentalists care about all species, but there's a particular fondness for rare, overspecialized, relictual, or otherwise troubled ones. As their numbers decrease, their protection becomes more urgent. Not only against human exploitation but against fire or flood, drought or disease; against competition or overpopulation; against change of any kind, even—if it's possible—against evolution itself. We're going to lose many of these. Everyone can see, in outline, where evolution is going. And that, for many species, it will be over soon.

Of all these threats, unnecessary human exploitation—the pet trade—is the most direct, the most visible, and, to environmentalists, the most insulting. They call a captive animal “biologically dead,” meaning that it can't contribute its genes to future generations, to the furtherance of its species, if only for one more generation.

But a captive animal is not biologically dead; he's very much alive. He's engaged in colonizing a new niche, in which his declining species might flourish. Namely, symbiosis with



man—the pet trade.

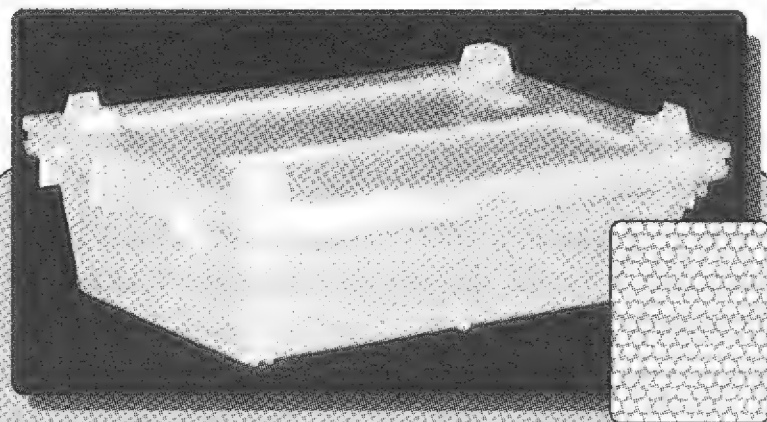
This can be a difficult niche to colonize; perhaps requiring, in the extreme, tens of thousands of trials. But success is rewarded by an otherwise-impossible increase in numbers, in geographic radiation over every continent, in generalism and genetic flexibility, in morphological radiation (albinism, hybridism, and multivariant color/pattern selection); producing a biomass often exceeding that ever possessed by its entire non-captive family. No domestic animal has become extinct; almost all their close relatives have. By any objective standard, this is evolutionary success. Compared to other evolutionary strategies, this is evolutionary nirvana.

Environmentalists mean a captive animal is *philosophically* dead, because in their philosophy there is no place for man or his symbionts. The world will remember in infamy these philosophical imposters, whose hatred of man, disguised as biology, prevented us from taking these species into captivity, in sustainable numbers, when we had the chance. **Tom Porter, 7812 Yarmouth Ave, Reseda CA 91335, (818) 343-1359.**

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Herpetology 1997

In this column the editorial staff presents short abstracts of herpetological articles we have found of interest. This is not an attempt to summarize all of the research papers being published; it is an attempt to increase the reader's awareness of what herpetologists have been doing and publishing. The editor assumes full responsibility for any errors or misleading statements.

EGG-LAYING VERSUS VIVIPARITY IN REPTILES

C. P. Qualls [1997, J. Herpetology 31(1):60-65] notes that the most widely accepted hypothesis for the evolution of viviparity in reptiles invokes cold climates as the selective force responsible. The "cold climate" hypothesis proposes that viviparity is adaptive in cold climates because developing embryos experience warmer temperatures in utero (through maternal thermoregulation) than they would in a nest. Most authors have assumed that these warmer incubation temperatures provide an advantage by protecting embryos from lethally low temperatures or by allowing them to hatch before the onset of winter. Thus, the "cold climate" hypothesis (at least in its traditional form) purports that viviparity evolves in cold climates because females that retain their developing offspring in utero will have greater reproductive success than females that lay their eggs in a nest. To test this hypothesis, the author conducted a reciprocal transplant experiment using the Australian lizard, *Lerista bougainvillii*. This skink is reproductively bimodal—live-bearing in some parts of its range and egg-laying in others. Gravid oviparous and viviparous females were transplanted into field enclosures in both a "hot" and a "cold" climate, to monitor the effects of climate on their reproductive success. The live-bearers had higher reproductive success than the egg-layers in both climates, but reproductive success did not differ between the hot and cold climates within either reproductive mode. The viviparous lizards were more successful at producing offspring, regardless of climatic conditions. Thus, viviparity provided an advantage (in terms of embryo and/or neonate survival) under the conditions of the experiment, but this advantage was not restricted to cold environments.

ECOLOGY OF AN ARGENTINE SNAKE COMMUNITY

A. A. Yanosky et al. [1996, Herpetol. Nat. Hist. 4(2):97-110] studied the composition and ecology of the snake community at El Bagual Ecological Reserve in the Chaco of Argentina. Thirty-three snake species, in five families, make up the fauna. *Liophis poecilogyrus*, *Bothrops neuwiedii*, *Waglerophis merremi*, *Helicops leopardinus* and *Thamnodynastes* sp. are the most common species. The three largest species found were *Eunectes notaeus*, *Hydrodynastes gigas* and *Mastigodryas bifossatus*. Nine species, two of which (*Bothrops neuwiedii* and *Micrurus frontalis*) are venomous, were commonly found associated with human dwellings. Seasonal incidence of snakes appears associated with rainfall and temperature. Anurans are the most important prey on a community-wide basis. Oviparity is the most common mode of reproduction, possibly related to high temperature and humidity level in the Chaco. Comparisons with Neotropical snake faunas of rain forest, caatinga, pantanal and cerrado sites in Brazil and Perú reveal that the El Bagual snake fauna is somewhat intermediate in composition and habits.

EFFECTS OF KETAMINE ON SNAKES

J. Schumacher et al. [1997, Copeia (2):395-400] determined the effects of ketamine HCl on cardiopulmonary function in 10 grey ratsnakes (*Elaphe obsoleta*), weighing 320 ± 150 g (mean $\pm$ SD). To establish normal values of cardiovascular response, they measured arterial blood pressure, carotid arterial blood flow, heart rates, breathing rates, and arterial blood gases in conscious snakes positioned both horizontally and in a 45° head-up tilt. Then they measured the same variables following intravascular administration of ketamine HCl (41 ± 6 mg/kg). Administration of ketamine produced significant tachycardia, hypertension, and decreases in breathing rates which were reflected in modest changes of arterial pH and respiratory gas pressures. Arterial oxygen saturation, however, exceeded 95% in both conscious and anesthetized snakes. Administration of ketamine produced nearly twofold increases in systolic, diastolic, mean, and pulse systemic arterial pressures of resting snakes in horizontal position. In response to head-up tilt, central arterial pressures decreased in anesthetized snakes but did not fall below levels that were regulated by reflexogenic increases in conscious snakes. Thus, administration of ketamine HCl to snakes produced significant hypertension but did not seriously compromise cardiovascular performance in response to gravitational stress.

DIFFERENTIATION BETWEEN *EURYCEA* SPECIES

J. L. Carlin [1997, Herpetologica 53(2):206-217] notes that the plethodontid salamander *Eurycea guttolineata* has been considered to be conspecific with *E. longicauda*. However, specimens from the putative zone of intergradation could be unequivocally identified as one taxon or the other by the presence of five fixed allozyme differences (out of 21 loci examined). A sixth fixed difference exists between the southernmost locality of *E. l. longicauda* and the northernmost locality of *E. guttolineata*. No introgression was observed at any of these six loci. Morphometric variation in preserved specimens ($n = 530$) of these taxa was slight and not readily attributable to any geographic or genetic pattern. Allozyme genotype was most concordant with the length of the longest mid-dorsal stripe. Other color pattern characters previously used to identify supposedly intergrade populations were found to be uninformative about genotype. Twelve specimens previously reported as intergrades fell within the range of phenotypic variation of allozymically identified *E. l. longicauda*. Therefore, the author considers doubtful the status of these individuals as hybrids. The distribution of specimens classified by relative mid-dorsal stripe length within the supposed zone of intergradation indicates parapatry rather than a broad zone of sympatry or intergradation. Without support for intergrade specimens or a zone of intermediacy, and with the presence of six fixed differences between the closest localities of alternate species, the author considers *E. guttolineata* a distinct species.

ARE X-RAYS SAFE FOR DEVELOPING TURTLE EMBRYOS?

T. G. Hinton et al. [1997, Chel. Conserv. Biol. 2(3):409-414] note that radiographic techniques are well developed for turtles and have been used on many species to assess ovarian status. Their study asks the question, "Is radiography a sound scientific technique in which the benefits exceed the risks, or are the doses sufficient to warrant concern, suggesting that the technique be discontinued?" They addressed this question by: 1) measuring the dose turtle embryos receive when adult females are X-rayed for determination of clutch size, and 2) comparing the magnitude of the measured dose to levels known to have caused damage. Their conclusions were that radiography can be used routinely without fear of adverse effects for the following reasons: 1) Estimated dose to the turtle eggs was measured with thermoluminescent dosimeters to be 1.17 ± 0.04 mGy; 2) There is no evidence in the literature documenting reduced fecundity, teratogenic, or population level effects at an acute dose of 1 mGy; 3) The data available give no indication that reptiles should be especially sensitive to radiation when compared to other organisms; 4) The literature indicates that the lowest dose at which harmful effects from acute irradiation have been reliably observed is 10 mGy; 5) Previous studies did not find a reduction in hatchability of eggs from X-rayed turtles compared to controls; 6) Embryogenesis in turtles is delayed while the egg is in the female and does not resume until oviposition. Thus, concern for heightened radiosensitivity to the eggs because they are undergoing rapid cell division is negated; 7) Reviews by the National Council of Radiation Protection and Measurements, the International Atomic Energy Agency, and the National Research Council of Canada have concluded that acute doses below 100 mGy, and chronic doses of 1 mGy/d, to even the more radiosensitive species are unlikely to produce persistent, measurable deleterious changes in populations or communities of plants or animals.

ECOLOGY OF A NOCTURNAL LIZARD IN THE AMAZON REGION

L. J. Vitt and P. A. Zani [1997, Herpetologica 53(2):165-179] note that *Thecadactylus rapicauda* in the eastern and western Amazon region occurs on large trees within the forest but readily moves into buildings. *Thecadactylus* in the western Amazon is more common in buildings than in the eastern Amazon, where *Hemidactylus* invades buildings. Body temperatures averaged $26.9 \pm 0.3^\circ\text{C}$ and were similar to both air and substrate temperatures. There was very little morphological variation between sites or sexes, although lizards in the western Amazon region were larger. Frequencies of tail loss were high and presumably reflect success of escape from predation attempts. *Thecadactylus* in the eastern Amazon ate a variety of prey, many of which are arboreal, whereas *Thecadactylus* in the western Amazon ate mostly cockroaches. There was a relationship between prey size and lizard snout-vent length, and *Thecadactylus* in the western Amazon ate disproportionately larger prey than did *Thecadactylus* in the eastern Amazon. Clutch size is one egg, and evidence suggests that females produce multiple clutches in rapid succession.

DEMOGRAPHICS OF THE RED-EARED SLIDER IN ILLINOIS

J. K. Tucker and D. Moll [1997, Chel. Conserv. Biol. 2(3):352-357] report that recaptures of nesting female turtles, *Trachemys scripta elegans*, in Illinois marked more than 20 years ago demonstrate a minimum adult survivorship of 85.2% per year. Age estimates based on plastron length were not reliable. Slow growth of some individuals of known age resulted in 50% underestimates of age. Mean clutch size was identical in known-age turtles and females of unknown age. Recaptured known-age turtles and larger newly marked turtles produced both more and larger eggs than did smaller newly marked turtles. Increased adult mortality of larger turtles whose reproductive output is positively correlated with female size may lead to reduction in number, size, and survivability of hatchlings per female produced in the population because the remaining females are smaller. Programs to compensate for adult losses by head-starting hatchlings or otherwise artificially decreasing hatchling mortality may not be as effective in mitigating population decline as programs to prevent adult losses.

A NEW GENUS AND SPECIES OF AUSTRALIAN FROG

J. D. Roberts et al. [1997, Copeia (2):373-381] describe a new genus and species of frog, *Spicospina flammocaerulea*, from the high rainfall region of southwestern Australia. *Spicospina* is defined by spines on the transverse processes of presacral vertebrae III and can be recognized by the massive parotoid glands and distinctive orange and blue ventral coloration. Immunological comparisons based on albumin and karyotype suggest that this frog represents another major lineage in the subfamily Myobatrachinae, thus warranting generic status. This lineage is more closely related to *Uperoleia*, *Pseudophryne*, *Myobatrachus*, *Arenophryne* and *Metacrinia* than to other myobatrachine genera. The single species is only known from three dystrophic swamps (area of occupancy 0.05 km², extent of occurrence 3.63 km²) in far southwestern Australia. The authors note that this is the third, new, restricted frog species described in the last 10 years from the high rainfall region of southwestern Australia, which demonstrates the inadequacy of documentation of biodiversity in this region.

STREAMSIDE SALAMANDERS AND BROOK TROUT

W. J. Resetarits, Jr., [1997, Amphibia-Reptilia 18(1):15-25] examined the species composition, relative abundances, and size distributions of an ensemble of streamside salamanders in two contiguous sections of an Appalachian headwater stream: one containing brook trout and one that was trout-free. The two stream sections were separated by a natural waterfall that formed a permanent barrier to the upstream movement of fish. The two stream sections differed in the overall abundance of salamanders, the relative abundance of the six species present, and the size-distribution of the salamander ensemble. These results suggest that brook trout have an effect on the structure of co-occurring ensembles of salamanders, and that the continued coexistence of stream salamanders with brook trout does not indicate lack of strong ecological interactions.

ADAPTIVE DIFFERENTIATION IN BROWN ANOLES

J. B. Losos et al. [1997, *Nature* 387:70-73] report on the long-term results of an experimental study in which populations of the brown anole, *Anolis sagrei*, introduced onto small islands from a nearby source, differentiated from each other rapidly over a 10–14-year period. The more different the recipient island's vegetation from that of the source, the greater the magnitude of the differentiation. Further, the direction of differentiation followed an expectation based on the evolutionary diversification of insular *Anolis* over its entire geographic range. In addition to providing a glimpse of adaptive dynamics in one of the most extensive generic radiations on earth, the results lend support to the general argument that environment determines the evolution of morphology.

TWO NEW *ELEUTHERODACTYLUS* FROM PERÚ

G. Flores and L. O. Rodríguez [1997, *Copeia* (2):388-394] describe two new species of the *Eleutherodactylus conspicillatus* group from Perú. *Eleutherodactylus skydmainos* occurs in the upper Amazonian lowlands of central and southeastern Perú; it is distinguished by relatively small size, an interocular fold, a shagreened dorsum with dorsolateral ridges, presence of a tarsal fold, basal toe webbing and color pattern features. *Eleutherodactylus karcharias* is known only from the type locality in the lower cloud forests of the Departamento Amazonas; it is characterized by a unique fin-shaped dorsal tubercle (hence the specific name, which is Greek for shark), dorso-lateral ridges, areolate venter and basal toe webbing.

NOTES ON TWO POORLY-KNOWN LEAF-TOED GECKOS

W. R. Branch and A. M. Bauer [1996, *Herpetol. Nat. Hist.* 4(2):127-134] use recent collections of two large, poorly-known species of South African *Phyllodactylus*, *P. microlepidotus* and *P. swartbergensis*, to supplement the limited data presented in the original species descriptions. Proportional data for a series of adult *P. microlepidotus* differ significantly from those published for the single, juvenile type specimen. New data are presented for life coloration, hemipenial structure, distribution, diet, behavior and reproduction in *P. swartbergensis*. Although restricted to the Groot Swartberge in the Cape Fold Mountains, this species extends further east than previously reported. It is sometimes active at low temperatures, but will actively bask during the day. It appears to be a generalist arthropod feeder and produces two eggs per clutch.

CONSERVATION OF THE DANUBE CRESTED NEWT

J. W. Arntzen et al. [1997, *Amphibia-Reptilia* 18(2):133-142] estimate the range boundaries of the Danube crested newt (*Triturus dobrogicus*) from published data and new observations. The species' range is restricted to the Pannonian and Dobrogean lowlands of central and eastern Europe. The authors recommend that *T. dobrogicus* be inserted in the category "vulnerable" of the IUCN red list of threatened animals. The main cause of decline is habitat destruction through the conversion of wetlands, (semi-)natural land and pasture into arable fields.

COLOR CHANGES IN HORNED LIZARDS

W. C. Sherbrooke [1997, *Amphibia-Reptilia* 18(2):155-175] studied and compared rapid color-change in three congeneric desert lizards of diverse size. Using in vitro skins, the highest % skin-darkening values (15–19%) of dose-response curves for α -melanophore stimulating hormone (α -MSH) were determined for each species. In the smallest species, *Phrynosoma modestum*, melanophores responded to α -MSH over the broadest range, $2.5 \times 10^{-10} - 6.5 \times 10^{-8}$ M. Isoproterenol, a β -adrenoceptor agonist, was less effective than α -MSH at darkening skins, 5% in *P. cornutum*. Norepinephrine (NE), an α -adrenoceptor agonist, dramatically lightened α -MSH darkened skins of *P. solare* and *P. modestum*. Catecholamine responses were further investigated with the α -adrenoceptor blocker Dibenamine and the β -adrenoceptor blocker oxprenolol. *Phrynosoma cornutum* did not respond to NE. The effects of temperature on α -MSH activity were studied in vitro and in vivo. Skins in vitro darkened most rapidly in response to α -MSH at 41°, to an intermediate degree at 22°, and least at 6°C. Lizards in vivo exhibited the darkest color at 22°, lightest at 41°, and intermediate color at 6°C. A potent α -MSH receptor agonist, [Nle⁴, D-Phe⁷]- α -MSH, was used to further study the significance of temperature on in vivo α -MSH regulation of color. Both *P. cornutum* and *P. modestum* placed on black-and-white backgrounds for 24 hours failed to show background matching. Diel color changes associated with thermoregulatory needs are apparently consistent with crypsis, an antipredator strategy; cool lizards darken (to increase solar thermal gain) in early morning and late afternoon when background shadows are prominent, and warm lizards lighten (to reduce solar thermal gain) at midday when the albedo of the environment is high.

CLUTCH SIZE AND FREQUENCY IN FLORIDA BOX TURTLES

C. K. Dodd, Jr. [1997, *Chel. Conserv. Biol.* 2(3):370-377] from 1992 to 1995 radiographed 515 Florida box turtles, *Terrapene carolina bauri*, residing on an island off the west coast of Florida. Shelled eggs were observed from late March through early August in females from 124 to 153 mm carapace length. Clutch size varied between 1 and 5 eggs ($\bar{x} = 2.4$), with a mode of 2. Florida box turtles may produce two or three clutches annually although some individuals appeared to skip reproduction in some years. From 1.7 to 54.2% were gravid in any month sampled. Mean clutch size did not vary among months or sampling periods. The relationship between clutch size and both carapace and plastron lengths was linear and positive, although r^2 values were small. The author suggests that variation in annual clutch size and frequency of the population result from differential resource availability among years rather than from morphological constraints, and suggests a field study to test this hypothesis. Only a small percentage of the population produces multiple clutches, and clutch sizes are smaller than in northern conspecifics. The data suggest that the simple number of potential clutches is not a good measure of reproductive output in box turtles and is not a reliable estimator of the effects of removing individuals from a reproductively viable population.

HERP-ACROSTIC #14 by Mike Dloogatch

1	L	2	D	3	O		4	F	5	Q		6	R		7	J	8	L	9	V	10	B	11	E	12	I	13	R		14	X	15	H	16	A	17	P		18	T	19	J	20	F				
21	R	22	L	23	S		24	D	25	U	26	C	27	X	28	K		29	T	30	A	31	I		32	N	33	K	34	F		35	G	36	H	37	D	38	O	39	R		40	W				
41	P	42	X	43	Q	44	K		45	P	46	M	47	E	48	G		49	T	50	C		51	R	52	F	53	D	54	H		55	L	56	N	57	T	58	X		59	S	60	T				
	61	B	62	D	63	K	64	N		65	D	66	W	67	E	68	K		69	D		70	D	71	J	72	P		73	X	74	G	75	U	76	J	77	C	78	R	79	B	80	K				
81	F	82	N		83	K	84	L	85	W	86	C		87	G	88	F		89	K		90	X	91	O	92	R		93	Q	94	I	95	G	96	D	97	K	98	U	99	E	100	X				
101	S		102	G	103	H	104	B	105	Q	106	V		107	W	108	D		109	K	110	D		111	E	112	M	113	T	114	C	115	D	116	N	117	U		118	S	119	K	120	P				
121	V	122	U	123	L	124	F	125	C		126	H	127	G	128	K	129	C	130	D	131	E	132	F	133	B		134	A	135	N	136	K		137	Q	138	J	139	S	140	A	141	W	142	P		
143	G	144	U		145	O	146	D	147	F		148	N	149	R	150	X	151	G	152	F	153	T	154	H	155	A	156	B		157	D	158	R	159	F		160	K	161	B	162	F	163	W			
164	R		165	I	166	M	167	E	168	N	169	K	170	A		171	D	172	C	173	X		174	T	175	G	176	I	177	K		178	P	179	T	180	J		181	L	182	D						
183	F	184	D	185	P		186	S	187	G	188	E	189	C	190	U		191	R	192	F	193	V	194	G	195	X		196	J	197	F		198	Q	199	B	200	S	201	G	202	R	203	N			
204	M	205	D		206	F	207	A	208	I	209	T		210	U	211	L	212	S	213	M	214	F	215	K		216	C	217	G	218	S		219	E	220	K	221	D	222	J	223	G	224	R			
	225	P	226	H	227	L	228	O	229	T		230	C	231	Q	232	K	233	F		234	G	235	D	236	B	237	N	238	K	239	U																

How to solve this puzzle: The diagram, when filled in, will contain a quotation from a published work on herpetology. The numbered squares in the diagram correspond to the numbered blanks under the WORDS. The letter at the upper right of each square indicates the WORD containing the letter to be entered in that square. The WORDS form an acrostic: taking the first letter of each in order spells out the name of the author and the title of the work from which the quotation is taken. The solution will appear in next month's *Bulletin*.

CLUESWORDS

A. Co-author of <i>The Amphibians and Reptiles of Louisiana</i> (last name only).	16 207 140 170 155 134 30	L. Chaetognath.	8 211 84 227 181 55 22 123 1
B. Without fangs.	161 61 199 133 79 236 104 10 156	M. Like <i>Opheodrys aestivus</i> or <i>Virginia striatula</i> , for instance.	166 112 213 204 46
C. Structure in which cutaneous sense organs can be found in larval amphibians and in adults of aquatic species (two words).	26 216 230 50 77 86 189 114 172 129 125	N. A patch of strongly differentiated scales on the venter of certain eublepharid lizards.	237 64 82 203 32 116 56 168 148 135
D. One of Aesop's best known fables (five words).	130 24 53 157 110 37 235 96 65 108 182 69 70 171 221 205 115 146 2 184 62	O. <i>The War with the _____</i> , 1930s science-fiction by Karel Capek.	3 91 228 145 38
E. Of scales, overlapping like roof tiles.	188 99 219 11 131 111 47 67 167	P. _____ of the <i>Sea-Serpents</i> by Bernard Heuvelmans (1968 English edition) (three words).	142 17 45 41 120 72 178 225 185
F. Philip G. Wylie's 1942 opus that introduced the term "Momism." (three words).	20 147 233 34 162 183 197 81 192 152 52 132 124 4 214 159 88 206	Q. The corner of the eye, where the eyelids meet.	137 198 43 93 231 105 5
G. One of Aesop's lesser known fables (five words).	48 201 74 35 217 87 102 151 194 127 187 175 223 143 234 95	R. Author of <i>Amphibians and Turtles of the Philippines</i> (1921) (full name and middle initial).	21 51 92 78 149 191 158 39 6 164 13 202 224
H. _____ viper (a.k.a. meadow viper).	15 103 54 126 226 36 154	S. Descriptive word for snakes of the genus <i>Salvadora</i> .	118 139 200 101 59 23 212 186 218
I. Any member of the Old World lizard family that includes the mastigures.	12 165 94 208 176 31	T. Like a giant tortoise's foot, for example.	209 113 57 18 49 29 229 174 153 179 60
J. Assiduous.	180 19 138 196 76 71 7 222	U. <i>The _____ of the Reptiles</i> by Romer (1956).	75 239 117 122 25 190 98 210 144
K. <i>Thamnophis brachystoma</i> (three words).	215 80 68 28 109 33 128 89 136 44 232 119 63 160 238 177 97 83 169 220	V. Crotalines have them.	106 193 9 121
		W. Auscultate.	163 107 141 40 85 66
		X. Dystocia (hyphenated).	27 73 195 14 100 90 173 42 58 150

Advertisements

American Federation of Herpetoculturists: A nonprofit national membership organization of herpetoculturists, veterinarians, academicians and zoo personnel involved in the captive husbandry and propagation of amphibians and reptiles. Membership includes highly acclaimed magazine, *The Vivarium*, dedicated to dissemination of information on herpetocultural accomplishments, herp medicine, breeding and maintenance, field studies and adventures, enclosure design and much more. AFH membership is \$26. Send information requests to: AFH-News, P.O. Box 300067, Escondido CA 92030-0067.

For sale: rats and mice—pinkies, fuzzies and adults. Quantity discounts. Please send a SASE for pricelist or call Bill Brant, *THE GOURMET RODENT*, 6115 SW 137th Avenue, Archer FL 32618, (352) 495-9024, E-mail <GrmtRodent@aol.com>.

For sale: murine-pathogen-free rats and mice available in all sizes, live or frozen: pinkies, fuzzies, crawlers, small, medium and large. Frozen crawler mice in lots of 2000, \$.17 each. Also available, full grown hairless mice. FOB shipping point. Master Card accepted. Call (518) 537-2000 between 8:00 A.M. and 5:00 P.M. or write SAS Corporation, 273 Hover Avenue, Germantown NY 12526 for prices and additional information.

For sale: high quality feeder mice. Shipped UPS Next Day Air. All mice are properly processed to insure a quality product. Fourth year of production and supply of frozen feeder mice. Prices: pinks, \$25/100; fuzzies, \$30/100; weanlings, \$35/100. Also available are 4 oz. + rats, \$100/100. Quantity discounts available. The Mouse Factory, P.O. Box 85, Alpine TX 79831, (915) 837-7100, Ray Queen.

For sale: from Bayou Rodents, excellent quality feeder mice and rats. Every size available. Pinks starting at \$20/100. Orders are shipped by overnight service Monday thru Thursday. We accept Visa, MasterCard and Discover. For more info, contact Rhonda or Peggy, (800) 722-6102.

For sale: **high quality frozen feeders.** Over a decade of production and supply. Seven sizes of mice available: small newborn pinks up to jumbo adults. Prices start at \$25 per 100. Feeders are separate in the resealable bag, not frozen together. Low shipping rates. Free price list. Kelly Haller, 4236 SE 25th Street, Topeka KS 66605, (913) 234-3358 evenings and weekends.

For sale: In stock, Flex-watt and Ultra-therm heating products. **Frozen rodents** always available. Mice: pinks–crawlers, 3/\$1; weanlings, 40¢; subadult, 50¢; adults, 65¢; large adults, 75¢. Rats: small, 85¢–\$1; medium, \$1.25–2.00; large, \$2.25–2.75; jumbo, 3/\$10. Call on quantity discounts [note: discount on orders picked up at CHS meetings]. Live rodents available at higher prices. **Available now:** newsletter/catalog—many unique/hard-to-find herp husbandry items. Send business-size SASE for catalog, or call. Scott J. Michaels, D.V.M, Serpent City, P.O. Box 657, Island Lake IL 60042, (815) 363-0290.

For sale: *Vivarium* magazines, original volume 1–12, asking \$350 but make an offer! Chris, (313) 433-1601 eves. or leave message. [MI]

For sale: Herp bags—colors vary, translucent ripcord nylon, super lightweight, extremely durable construction with hot corners sewn in, double seamed. Custom sizes made upon request. Sizes: 46" × 14", \$7 each; 24" × 12", \$6 each; 24" × 6", \$5 each. Shipping fees, \$1 for first bag, \$.30 each additional bag. Nicole Lechowicz, 290 Warren Road, #69, Carbondale IL 62901, (618) 457-2783.

For sale: 3' Neodesha cages, \$60 each; 75-gallon tank with lighting and mesh top, \$100 o.b.o. Jim McDermott, (708) 425-1152

For sale: Siebenrock's sidenecks (*Chelodina siebenrocki*), \$150 each; matamatas (*Chelus fimbriatus*), \$1500 per breeding pair; New Guinea snappers (*Elseya novaeguineae*), \$60 each. Phil Drajeske, 8012 Greenwood Avenue, Munster IN 46321, (219) 838-8032.

For sale: 10" alligator snapping turtle with tank and filter, \$100 [permit needed in Illinois]. (708) 652-2686.

For sale: available now! **Tortoises:** Aldabras, 3–4" captive hatched; redfoots, beauties, \$125 each. **Boas/pythons:** young adults/adults. Three male and three female Children's, reddish desert phase, females *gravid* and have produced 11–20 eggs each in the past; two male and one female Australian olives, 10–12', adults, proven breeders, \$1500/trio; two male and one female Mardarin *Sanzinia*, males 6–7', female 8–9' and approx. 20 lbs., with CITES, \$5500/trio; one male and one female Bolivian redbills (*amarali*), 6–7', nice, heavy-bodied, proven breeder, \$2750/pair; two male and one female Hog Island boas, proven breeder male has fathered eight litters in the past few years, the remaining pair are subadults, \$1000/trio; two male and two female rough-scaled sand boas, adults, beauties, both females probably gravid, \$300/pair; two male and two female Amazon emerald tree boas, nice markings and color, long-term captives, \$2500 each; one male and one female green tree pythons, nice light green, light blue and white, adults raised from young, \$900/pair. Dick Goergen, P.O. Box 225, Alden NY 14004, (716) 681-4518.

For sale: captive bred 1997 "Egyptian" tortoises, *Testudo kleinmanni*, \$300 each. Colin, (773) 784-8968.

For sale: red-footed tortoise, \$150; African fat-tailed geckos, \$30 each. Also, birdcage (for Chameleons), \$25. Marc, (630) 243-9758.

For sale: **c.b. "vittikins" bearded dragons** (*Pogona vitticeps* × *P. rankini*). Smaller than standard bearded dragons. Perfect size pets! Healthy red phase babies born 5/14/97, \$30. Also **c.b. leopard gecko babies!**, normals, \$20, high yellows, \$25; **c.b. Jackson's chameleons**, \$30. All the babies are well started and available to good homes only! See Audrey Vanderlinden at CHS or call (773) 561-9003. **NOT a commercial breeder.**

For sale: c.b. geckos—Giant Boehme's day gecko (*Phelsuma madagascariensis boehmi*), well started juveniles, \$65 each; ornate day geckos (*P. ornata*), \$35 each; Seychelles Islands day geckos (*P. astriata semicarinata*), \$65 each; Madagascar fish-scale gecko (*Geckolepis typica*) 5–6" as adults, \$40 each; new, undescribed gecko (*Paroedura* sp.) 6–7" as adults, nice patterns and colors, \$75 each; high-yellow phase leopard geckos, \$30 each; Chinese cave geckos (*Goniurosaurus lichtenfelderi* ssp.), yellow-banded variety, blood-red eyes. Philip Tremper, P.O. Box 264, Clintonville WI 54929, (715) 823-5873.

For sale: captive-bred panther chameleons (*Chameleo pardalis*), juveniles (up to 6 months old) and hatchlings available, two color phases (Ambanja blues and reds) available, extremely healthy offspring from gorgeous parents, Ambanja blues \$100 & up, red phase, \$75. Quantity discounts available. Brian, (414) 672-4211. [WI]

For sale: captive-bred snakes, lizards, tortoises, and amphibians. Prospective births and hatchlings include: leopard geckos, Jackson's chameleons, carpet chameleons, African spurred tortoises, rat snakes, king snakes, milksnakes, black and northern pine snakes, western hognose snakes (permit needed in Illinois), African house snakes, spotted pythons, Macklot's pythons, Colombian boas, Brazilian rainbow boas. Also feeder mice available in quantities with rats coming soon. Send SASE for current price list or call/fax (903)693-3379 or E-mail <bobball@panola.cc.tx.us> R. L. Ball, 226 N. St. Mary Street, Carthage, TX 75633.

For sale: wide variety of captive hatched/produced reptiles from reputable breeder. Animals are from hand-picked adults with diverse bloodlines.

Milksnakes: Jalisco milks, \$90; Honduran milks, \$75; tangerine Hondurans, \$85–100; Pueblan milks, \$55–70; Nelson's milks, \$75; Sinaloa milks, \$60; Mexican milks, \$50. **Kingsnakes:** Mexican black kings, \$40; desert kings, \$35; Mexican mountain kings (*knoblochi*), \$225–400; Arizona mountain kings (*woodini*), \$75–90; San Pedro mountain kings (*agalma*), \$225; *thayeri*, \$75–100; melanistic *thayeri*, \$100; "mex mex," \$75; gray-banded kings, \$100.

Other snakes: axanthic trans-Pecos rat snakes, \$1000 each; boas, \$75; albino striped Pacific gophers, \$60; black pines, \$75; western hognose, \$30 [permit needed in Illinois]; regular corns, \$12.50; amelanistic corns, \$22.50; snow corns, \$25; regular banded Cal kings, \$20; albino banded Cal kings, \$25; lavender phase albino Cal kings, \$35. All animals are feeding on "unscented" mice unless otherwise indicated and have fed at least two times before shipping. Call for quantity discounts. Troy, (573) 642-9422. [MO]

For sale: female northern pine snake, c.b. 1993, high b/w contrast, Chicago area pick-up, \$70. (708) 361-5835.

Advertisements (cont'd)

For sale: one male and one female adult eastern indigos (*Drymarchon corais couperi*) CA sales only, 3-4 years old, \$750/pair; baby leopard tortoises (*Geochelone pardalis babcocki*), cute little guys, \$110 ea; adult female long term Hermann's tortoise (*Testudo hermanni boettleri*), Yugoslavian origin, many years in someone's CA backyard, \$400. Many more animals, Reptile D-Lights and other supplies for sale. Scott Solar, (909) 627-3274, 9-9 PST, or visit our website at <www.reptilia-tech.com>.

For sale: orange Pueblan milksnakes, c.b. '97, from Seven Generations stock, \$75; hatchling leopard geckos, from beautiful zoo-born stock with lots of yellow, limited quantities, \$12; c.b. '96 male blotched kingsnake, nice pattern, \$25. Also, melamine cage (Custom Cages, Inc.), 6' x 3' x 3', like new, with lock, fluorescent light fixture, ceramic fixtures, six 4' VitaLite Power Twists, Kane heat mat, Pearlco heat elements, and matching melamine stand that can easily be converted into a second cage or storage (has two doors), only \$400; glass cage, 5' x 2' x 2', custom made, free if you buy the melamine cage or \$50, must pick up, perfect shape, contact Rob Carmichael at (847) 615-4388 and leave message on voice mail or e-mail at <RCarmic416@aol.com>.

For sale: '97 c.b. hatchling snakes: Yunnan beauty (*Elaphe taeniura yunannensis*), \$75; Mexican milk (*annulata*), \$55; Arizona mountain king, \$100; Huachuca mountain king (*woodini*), \$100. Henry Cohen, 24 St. Johns Place, Buffalo NY 14201, (716) 881-6724.

For sale: **anerythristic Honduran milksnakes**, *knoblochi*, Andean milksnakes, pin-striped Mexican milksnakes, large selection of locality *alterna* (Loma Alta, Langtry, Lajitas, Black Gap). Check out my web page at <<http://www.io.com/~danjohns/>>. This site has photos of most of my breeders and will have photos of available offspring starting in July. Send SASE for free price list and current stock list. Dan Johnson, P.O. Box 440893, Houston TX 77244, (281) 589-1874.

For sale: one male and one female Sumatran blood pythons, beautiful red and cream, long term captives, \$450/pair; adult female emerald tree boa, long term, \$350. Call (608) 835-7510; E-mail: <bbhaley@facstaff.wisc.edu>. [WI]

For sale: from private breeder — rainbow boas; black pines; blonde trans-Pecos rat snake; gray-banded kingsnakes (Langtry); Tennessee corns (rare locality). Future projects: Baja rat snakes; Peruvian matamatas; Mexican redleg tarantulas; Okeetee corn snakes; ghost corn snakes; melanistic garter snakes (unusual form of melanism, male is solid black with three blue stripes on back and a powder blue chin. Mike Stefani, (630) 372-3936.

For sale: c.b. '97 Burmese pythons, heterozygous for albino or green (patternless), \$45 each. Unrelated clutches. Quantity discounts available. Also, c.b. '97 high yellow leopard geckos, unrelated pairs available, \$25 each; c.b. '97 African fattail geckos, hetero for stripe, \$40 each, regular, \$35 each, striped, \$45 each. Sue Black or Ed Schoene, (607) 264-3441, 6-10 P.M. [Springfield Center NY]

For sale: **jungle carpet pythons**, *Morelia spilota cheynei*, beautiful yellow on velvet black. Babies, \$300 each, \$550/pair. Adults available — inquire. Mexican milksnakes, young adult pair, ready to breed this year. Also, Borneo blood pythons, babies, yearlings, adults. Bill Montgomery, P.O. Box 656, Elgin TX 78621, (512) 285-5520 days, (512) 285-9631 evenings or E-mail: <TILQUA@aol.com>.

For sale: **Jungle fever!** Jungle carpet python hatchlings now available, high yellow banded, some unusual markings, big and healthy, parents are sizzling yellow and velvet black, choice picks from Don Hamper bloodlines. Taking deposits now. Animals of this quality will not last long, \$400 each. Also, female *Boa constrictor occidentalis*, yearling, beautiful pick animal, \$200; one male and two female rare Iquitos redtails, male 2¼ years old, females 2½ years old, \$1500/trio. Bob and Diane, (630) 307-0879.

For sale: from **Diversified-Genetics** . . . Superior bloodlines of captive-bred snakes. Are you tired of buying snakes whose family trees go “straight-up”? I am a small private breeder (hobbyist for 25+ years) who is absolutely dedicated to providing you with the finest in strong, genetically diverse, outcrossed bloodlines. The end result of all of this is very simply that the animals that I am producing are good strong babies! Boa constrictors (albinos and possible heteros born 5/10/97); Burmese pythons (cinnamons, green patternless, cinnamon green patternless and possible heteros due 6/97); patternless northern pines (recessive mutation from pure northern stock, first time offered in U.S., available now); Sonoran desert kings (heterozygous for hypomelanism, due 7/97). Many others, free price list. Steven E. Snow, **Diversified-Genetics**, P.O. Box 544, Rockton IL 61072, (815) 624-8204.

For sale: yellow anacondas, flawless captive born babies from high contrast, docile adults, yellow with black spots, \$150 each; carpet pythons, captive born babies from huge, vividly colored parents (Brian Barczyk bloodline), some of the nicest carpets you'll see, only a few left, \$125 each. Mark Petros/Strictly Serpents, (847) 854-3259 home, or (847) 854-2992 work.

For sale: **Chondros, Chondros, Chondros!** Ophiological Services is ready to provide you with your own captive-born green tree python from the world's largest and most diversified genetic collection of green tree pythons, second to none. All animals are very well established with data cards, genealogy charts, and scientific reprints. Available for sale are babies, juveniles and 1-2 year olds. Other pythons, boas and colubrids available. Eugene Bessette, (352) 495-3075 phone, (352) 495-2952 fax, (Archer FL). We accept Visa and MasterCard.

For sale: 1997 hatchlings. Trans-Pecos rat snakes, Mexican hognose [permit needed in Illinois], red milksnakes, \$35 each; Baird's rat snakes, prairie kings, California kings, \$25 each; Mexican milksnakes, Pueblans, albino speckled kings, \$50 each; *ruthveni*, \$75 each; *thayeri*, graybands, Durango mountain kings, \$100 each; Arizona mountain kings, \$125 each. Steve Mitchener, Oklahoma City OK, (405)748-6566 after 6 P. M. Central Time.

For sale: beautiful, feeding snakes. Wholesale quantities to dealers, individual purchases welcome. Send SASE for **free** price list. Robert Applegate, P.O. Box 338, Campo CA 91906, (619) 478-5123. Also, free phone consultation on snake husbandry problems as a service to the herp community.

For sale: Send SASE to CRC, P.O. Box 0731, Las Vegas NV 89125-0731 for brochures and list of species available. Limited bookings available for guided tours of herpetological collection sites in Nevada. Call/fax (702) 471-0240. E-mail <fpglwmau@anv.net>.

Free to good home: CHS *Bulletins* from 5/90 to present. Pick up in Des Plaines or pay postage. Clover, (847) 298-4760.

Pet-sitting service: Exotic pet-sitting by “The Lizard King,” in-home care. CHS member since 1979. Marilyn Kent, (773) 989-4472.

Pet-sitting service: Complete in-home pet and plant care, specializing in reptiles and other unique pets. Dogs and cats welcome with open arms, midday dog walking. Experienced and dependable service by devoted animal lovers, serving Chicago and suburbs, reasonable prices, fully insured and bonded. Ask about our habitat consultation and custom-made cages. Exotics & More, (312) 728-5457 or page us at (708) 750-3688.

Software: **TRACS™** record keeping and breeding software for IBM and compatibles. TRACS™ Professional, a full system, \$129; TRACS™ *Lite*, for the hobbyist, just \$39.95. Add \$5 s&h, \$10 outside U.S. Send for a working demo for \$10 (cost may be applied toward purchase). Or download demo free via Internet at <<http://www.herp.com/tracs/>>. Send check or money order to Leapin' Lizards, 23852 Pacific Coast Highway, #375, Malibu CA 90265.

Tours: Adventure tours to Madagascar! Join **Bill Love** seeing and photographing fauna and flora, heavily herp-biased, across the world's least known mini-continent. Maximum fun & photo ops assured on every trip. Contact him at: BLUE CHAMELEON VENTURES, P.O. Box 643, Alva FL 33920. TEL: (941) 728-2390, FAX: (941) 728-3276, E-MAIL: <blove@cyberstreet.com>.

Advertisements (cont'd)

Tours: **Road-riding in Costa Rica!** Treat yourself to the trip of a lifetime! Learn about tropical herps, find them, photograph them, see where they live. **Greentracks, Inc.**, offers the best herpetological tours led by internationally acclaimed herpetologists and herpetoculturists. See the Amazon, visit cloud forests, experience the world's greatest rainforest, super sunsets and good company. Call (800) 9-MONKEY.

Wanted: Colorado River toads (*Bufo alvarius*), healthy, legally obtained adults, six males and six females desired. Chris Palmer, (313) 433-1601 eves. or leave message. [MI]

Wanted: desert California kingsnake, high white. Marc, (630) 243-9758.

Wanted: adult western hognose snake; adult or subadult fox snake; leopard tortoise; savannah monitor (must be TAME); ball python (feeding) and possibly other nice animals to be used for our not-for-profit Wildlife Education Outreach Program at the Lake Forest Recreation Center. Will pay cash or preferably take donation (you will receive a letter for tax deduction as well as being included in our seasonal brochure as a contributor to our programs; you also will be included in a local cable tv ad thanking donors to this program). Rob Carmichael, (847) 615-4388 or e-mail at <Rcarmic416@aol.com>

Wanted: big-headed turtles; mata mata turtles; Mexican giant mud turtles (*Staurotypus triporcatus*); exceptionally large common snappers (45 lbs. & up); large alligator snappers (over 90 lbs.); spectacled caiman from Trinidad, Tobago and Surinam; dwarf caiman; smooth-fronted caiman; albino turtles (except red-eared sliders). Walt Loose, (610) 926-6028, 9:00 A.M. – 1:00 P.M. or after 11:30 P.M. Eastern Time.

Wanted: Styrofoam boxes, any size or shape so long as they're not flimsy, preferably with cardboard liners, willing to pay from \$2 to \$5. Bring to CHS meetings. Scott J. Michaels, D.V.M., Serpent City, (815) 363-0290.

Line ads in this publication are run free for CHS members — \$2 per line for nonmembers. Any ad may be refused at the discretion of the Editor. Submit ads to: Michael Dloogatch, 6048 N. Lawndale Avenue, Chicago IL 60659, (773) 588-0728 evening telephone, (312) 782-2868 fax, E-mail <MADadder0@aol.com>.

News and Announcements

NEW BOOK ON BORNEO HERPS AVAILABLE FROM AUTHOR

A new book on the amphibians and reptiles of part of Borneo has recently been published: *The Natural History of Amphibians and Reptiles of Sabah* by Robert F. Inger and Tan Fui Lian. The 101 pages include 123 illustrations in color, 108 of them being photographs of species. The book costs \$20 (including handling and postage within the U.S.) and can be ordered from Robert F. Inger, Field Museum of Natural History, Roosevelt Road and Lake Shore Drive, Chicago 60605. Make check or money order payable to Robert F. Inger.

NEW E-MAILING LISTS ON TURTLES AND MONITORS

Scott Solar has started two new E-mailing lists. For those of you unfamiliar with E-mailing lists, once you sign on as a listmember you have the ability to ask and/or answer questions, all through your standard E-mail account. There will be many and varied topics ranging from what to feed your animals to how to hatch eggs. Feel free to join and just lurk there soaking up info or become more involved by sharing your expertise with fellow listmembers. And of course, you can always ask those questions that you need answered; somebody should be able to help.

The first list, "Tortoise," is for all nonpolitical turtle and tortoise topics. This list is moderated and will not have political discussions on it. It will stick very closely to the husbandry, breeding, natural history and related sciences of chelonians. To sign on go to <<http://www.reptilia-tech.com/tortlist.htm>>. There is a short information form for you to fill out, and you are in. The second list, "Varanus" is for all nonpolitical monitor topics. It will stay with captive care, reproduction, natural history and related sciences of monitors of the world. To sign on go to <<http://www.reptilia-tech.com/varalist.htm>>. Once again, there is a short form to fill out and you are in.

"IGUANAS OF THE WEST INDIES" POSTER

The Fort Worth Zoo announce the publication of a beautiful new poster highlighting the conservation of iguanas of the West Indies. Featuring rare and exceptional color photographs of 14 of the 18 *Cyclura* and *Iguana*, this high-quality poster measures 20 × 26" and is printed on a heavy-duty paper stock suitable for framing. Produced to assist the IUCN/SSC West Indian Iguana Specialist Group in promoting the preservation of these endangered lizards, all proceeds from the sale of this poster will help to fund critical iguana research and conservation projects throughout the Caribbean. Posters can be obtained in the U.S. for \$13 including postage and mailing tube; international orders are \$16. Checks or money orders (in U.S. currency) should be payable to the Fort Worth Zoo. Mail requests to: Rick Hudson, Fort Worth Zoo, 1989 Colonial Parkway, Fort Worth TX 76110.

UPCOMING MEETINGS

The next meeting of the Chicago Herpetological Society will be held at 7:30 P.M., Wednesday, July 30, at the Field Museum of Natural History, Roosevelt Road at Lake Shore Drive, in Chicago. The speaker at this meeting is **Paul Freed** of the Houston Zoo, who will lecture and show slides about a herpetological collecting trip to the Republic of Cameroon, in West Africa. We are hoping for a big turnout for this exciting program. Tetra Terra fauna, the pet-product manufacturer, sponsors Paul's lectures, and they will reimburse us for 100% of his travel expenses if more than 100 people attend the meeting. As a little extra inducement, some very special items will be raffled off.

At the August 27 meeting **Roger Repp** of the Tucson Zoo will present a program on "Herps of Arizona." Roger grew up in the Chicago area, so some of you old-timers may remember him from CHS meetings 20-odd years ago.

We are required to use the entrance on the west side of the museum. **However, as of June we no longer have permission to use the parking lot to the west of the museum. For more information see the President's announcement below and be sure to call our CHS message line, (773) 281-1800, before you come.** Public transportation is an option: the Roosevelt Road (12th Street) bus now goes directly to the museum, thus providing a connection with the el and subway. This bus service runs until 11 P.M.

Turtle Club

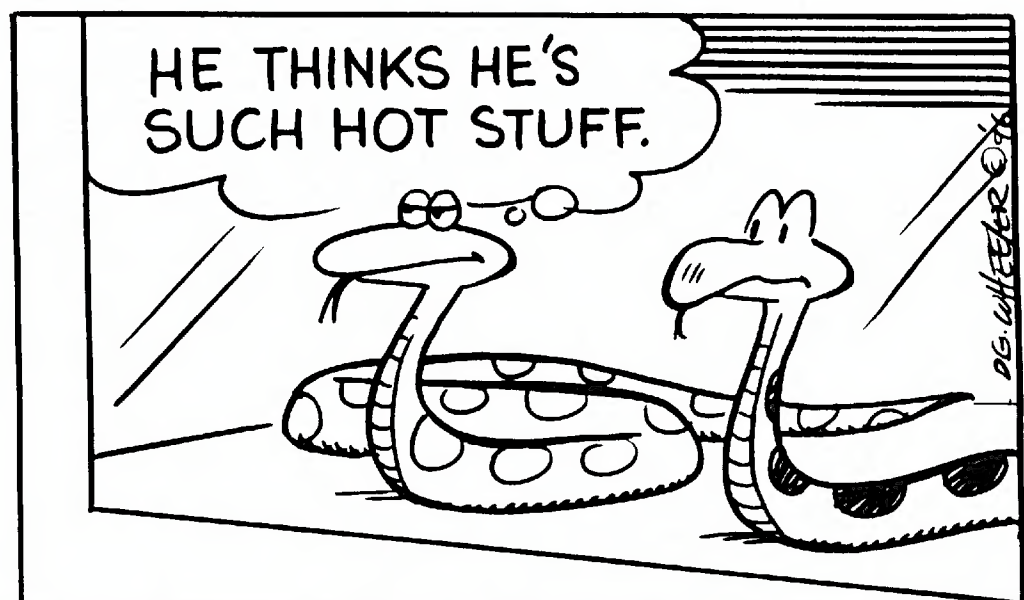
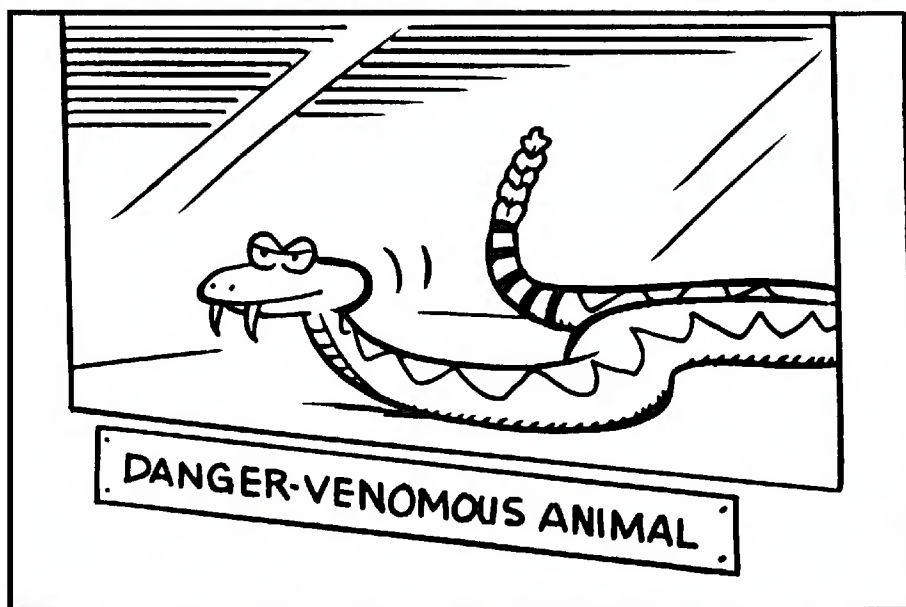
The Chicago Turtle Club will meet Sunday, July 27, 1:00–3:30 P.M., at the North Park Village Nature Center, 5801 N. Pulaski, in Chicago.

BAD NEWS AND GOOD NEWS FROM THE PRESIDENT

If you come to our meetings, you have been parking in the West Lot of the Field Museum and entering through the west door. Effective with the June meeting, we lost the use of the west parking lot. That lot is now restricted to staff and volunteers. If that isn't bad enough, McFetridge Drive between Soldier Field and the Museum is under construction and is a no-parking zone. As of this writing I have been unable to find out when this construction will end or if the parking meters will be made available in the future. There is a parking lot, run by the Chicago Park District, directly east of the museum; also there is the Soldier Field lot south of McFetridge Drive. But special arrangements must be made to open these lots, and they charge \$5 per car. We are looking into the possibility of reimbursing our members for any parking fees, at least in July. Call the CHS message line at (773) 281-1800 for the latest word on the situation. The long term parking availability is unknown at this time, but a couple of things to think about are car pooling and public transportation, and bringing money for parking. Monthly meetings are held for the members, and we appreciate your effort in making it to the meetings despite the summer construction you must deal with when driving to, and now parking at, the meetings.

Now for the good news. If you are a long-term member of the Society, you probably remember the book lists that used to be inserted in the *Bulletin*. Perhaps you even joined the Society to take advantage of some of the hard-to-find and unusual books listed. For the past few years, however, the book lists have not been there. Inserted in this issue of the *Bulletin* you will see a list of titles and a description of services offered to members of the Society by Zoo Book Sales. The CHS recently sold its book inventory to Serpent's Tale/Zoo Book Sales. As part of the arrangement, they will offer discounts to CHS members, and send their book list to members who order from the *Bulletin* inserts. We feel this agreement will benefit our members and offer them the chance to find books about our favorite subject, herps! If you have friends or acquaintances whom you think would enjoy taking advantage of the book deals offered to CHS members, please tell them this is a good time to join or rejoin the Society. **Steve Spitzer**

THE ADVENTURES OF SPOT



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